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YOGA

for

BACK PAIN

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Transliteration Codes with diacritical symbols

अ	=	a	ड	=	ḍ
आ	=	ā	ढ	=	ḍha
इ	=	i	ण	=	ṇa
ई	=	ī	त	=	ta
उ	=	u	थ	=	tha
ऊ	=	ū	द	=	da
ऋ	=	ṛ	ध	=	dha
ए	=	e	न	=	na
ऐ	=	ai	प	=	pa
ओ	=	o	फ	=	pha
औ	=	au, ou	ब	=	ba
अं	=	ṁ	भ	=	bha
अः	=	ḥ	म	=	ma
क	=	ka	य	=	ya
ख	=	kha	र	=	ra
ग	=	ga	ल	=	la
घ	=	gha	व	=	va
ङ	=	ṅa	श	=	śa
च	=	ca	ष	=	ṣa
छ	=	cha	स	=	sa
ज	=	ja	ह	=	ha
झ	=	jha	क्ष	=	kṣa
ञ	=	ña	त्र	=	tra
ट	=	ṭa	ज्ञ	=	jña
ठ	=	ṭha			

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YOGA

for Back Pain

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Dr R NAGARATHNA, M.D., (Gen.Med.),
F.R.C.P. (Edinburgh
Dr H R NAGENDRA, ME., Ph.D.,

VIVEKANANDA YOGA RESEARCH FOUNDATION
SWAMI VIVEKANANDA YOGA PRAKASHANA
#19, Eknath Bhavan, Gavipuram Circle,
Kempegowda Nagar, Bangalore - 560 019
Karnataka, INDIA

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FOREWORD

It is a common experience of human beings that their minds and bodies are closely interlinked. Any disturbance in either of them is bound to affect the other. Mental worries do lead to physiological problems and bodily discomfort does impact on the mind. Yoga and Ayurveda, the ancient Indian sciences recognised this symbiotic relationship of body and mind long ago and postulated the concepts of Ādhi and Vyādhi.

Closely linked with Ayurveda is the science of Rāja Yoga and its branch Hatha Yoga. Western philosophy and psychology even now lay great stress on the body and consider the mind to be its by-product. However the ancient Indian sciences have always considered mind as being supreme over matter and have based their practices on this idea.

That yoga practices can help in the amelioration of certain types of psychosomatic diseases has been known for a long time. But no systematic investigation had been undertaken based on modern accepted norms of scientific research. It goes to the credit of Swami Vivekananda Yoga Anusandhana Samsthana (sVYASA) that over the last quarter of a century it has conducted systematic research in this field and has developed packages of physical and mental practices suitable for several psychosomatic diseases.

There has been a need felt for some time to consolidate these results and to bring them out in the form of booklets, each one dedicated to a particular disease. I am glad that this need has now been amply met by this series of booklets, in which there is a methodical description of the Āsanas, Prāṇāyāma, Meditation and Kriya, in a simple and easily understandable language and profusely illustrated.

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The authors have to be congratulated for the pains they have taken in this venture. The general public indeed has to be grateful to them for the great service they have rendered. I am confident that with the awareness of the benefits of yoga now increasing among people around the world, the discerning persons would make proper use of these booklets for the improvement and maintenance of their physical and mental health.

Hariḥ Om Tatsat.

Prof NVC Swamy
Ex Director, IIT, Madras
Chief Adviser
sVYASA

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PREFACE

It was 1977-78 when Eknathji Ranade, the founder of Vivekananda Kendra movement called us and asked "as medical professionals of this motherland, what is your dream?'' We said that we could develop several hospitals giving high tech modern medical facilities to the needy brothers of this land. But he said that it is not enough if you just duplicate the hospitals in the existing style. Our mission should be to evolve techniques to unfold the inner potential divinity of man to heal and grow towards better and better positive health. And also establish the efficacy of our ancient science of yoga, which is no less than 5000 years old, in scientific terms as a socially relevant science. He also said that Bhārat should have several referal holistic healing centres where people from all over the world would come over and benefit from this unique knowledge of yoga therapy. He was the mastermind who encouraged us to go round the country, study at the feet of Yoga Gurus who had insights into this healing art. It was a great experience to go round several Yogashrams, talk to patients who had benefited from yoga therapy and record their progress.

It was our main task to learn 'what technique for what disease?' from these masters. After obtaining convincing evidence of the healing potential of the practices that had helped these patients, we sat down to compile the data and prepare the list of practices for different conditions. To our surprise it was all a great mess. The patients had improved very well but it was dynamic asanas in one centre, slow pace of asanas in another, only Prāṇāyāma in yet another or only meditation in another. To add to our confusion one guru would use a posture or breathing to cure a condition whereas another guru would prohibit the same posture or breathing for the same condition. For example, if

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Sarvāṅgāsana was never to be practiced for hypertensive patients as per one centre, the same would be the recommended asana in another centre.

A little deeper thinking gave us the clue to decipher this riddle. All these patients using any of the practices had actually practiced 'Yoga' - the state of inner tranquility, mastery and freedom from fears and anxieties. And this was the common factor that helped all of them towards complete recovery. Now it became simple for us to understand Swami Vivekananda's statement that the goal of healing is to unfold the potential divinity by one or more or all of the four aspects of yoga, namely Karma, Bhakti, Jnāna or Rāja yoga. Thus yoga therapy is not organ specific but it is a science that works holistically to strengthen the inner being.

The next bigger challenge was to put together the concepts learnt from these Gurus, the knowledge base from traditional texts, the growing knowledge of pathophysiology of diseases from modern science and the feasibility of teaching them to our patients in an acceptable and enjoyable fashion.

We started scanning through the traditional texts of yoga and spirituality. The concept of 5 layered existence of all of us as postulated and described in great detail in Taittireya Upaniṣat as Panca Kośa was found to be the most holistic concept of human existence which is in no way contradicting the modern systematic approach to the understanding of human body. It is more generalised, holistic and hence can contain in it the physical body [Annamaya Kośa] and the next three layers Prāṇamaya, Manomaya, and Vijnānamaya Kośās which are called the subtle bodies in Vedanta and spiritual lore. The fifth kośa the Ānandamaya Kośa is the causal body from where all other layers take birth. Thus we got a holistic and concrete perspective of human existence as the foundation for yoga therapy.

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Disease, in modern medical perspective is considered as dysfunctioning of organs and systems which may be due to congenital defects, external atmospheric agents like allergens, toxins, pollutants or infectious germs. Modern science does recognize that the other major cause for diseases could be the factor of internal imbalances like mental restlessness, emotional upsurges or intellectual conflicts that lead to stress reactions.

The concept of disease according to yoga is found in the treatise called Yogavāsiṣṭha. According to this text, the modern diseases such as asthma, diabetes, hypertension, and anxiety are called "Ādhija Vyādhi"(stress born diseases) originating in Manomaya Kośa- the astral layer of our existence. They arise from our actions that are governed by our emotions [strong likes and dislikes] rather than what is right or what is wrong. Often in this phase, we respond to our emotions - the pull of senses knowing fully well that we are going against what is right. This is called Prajnāparādha in Ayurveda-a mistake at the level of inner consciousness. It is this 'going against what is right - the cosmic law 'that causes an imbalance, a dis-ease at the Manomaya Kośa called Ādhi.

The Adhi at the astral layer if not remedied will bring imbalances at the level of Prāṇamaya Kośa that shows up as breathing jerks, imbalances and speed. This in turn creates stress reactions causing autonomic and endocrine imbalances leading to diseases in the body called Vyādhi. Such diseases are called Ādhija Vyādhi i.e. Vyādhis created of Ādhis. The other category of diseases such as infections and injuries come under Anādhija Vyādhis which essentially are physical in nature and can be tackled by modern medical system effectively. Since the Ādhija Vyādhis are multi dimensional, we need to tackle them not merely with physical symptomatic treatment measures. The whole man has

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to be treated. And only then can there be lasting remedy to our problems of the modern era. The answer lies in the Integrated Approach of Yoga Therapy that provides techniques for correcting the problem at both the gross (physical) and subtle levels. Yoga practices help in bringing about balance at the level of all the five Kośas so that complete health can be restored. The practices at Annamaya Kośa include yogāsanās, Śithilīkaraṇa vyāyāma [loosening practices], yoga diet and yoga kriyās, at Prāṇāmāya Kośa - breathing practices, breathing kriyās and Prāṇāyāma. At the Manomaya Kośa, the practices are meditation [Cyclic meditation and Om meditation], devotional sessions and happy assembly, where-as lectures, counseling and satsangs correct the notions about one's life ambitions and goals that form the basic conceptual root for the life style of the individual. Karma yoga and tuning to nature are the practices that help one to get established in Ānandamaya Kośa bringing bliss in our lives.

Based on all these information, we felt confident to start off our courses in yoga therapy with several workshops, camps, conferences, and seminars between 1980 to 85. Thousands of patients participated, learnt the techniques and started giving their feed -back. Based on the experiences of the patients we went on learning what, why and how of many of the techniques taught to them. A general set of integrated approach of yoga therapy which gave fascinating results in diseases like asthma, diabetes, hypertension, anxiety, etc. started evolving into more and more specific practices which could give quicker results, requiring lesser duration of practices. We also learnt from the feedback of patients how to give immediate relief for episodic conditions like asthma, migraine, panic disorders, etc. While treating these patients, we recorded data before and after 2 weeks of yoga therapy and followed them up to 10 years. The results

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were statistically analysed and published in indexed scientific medical journals.

This series of booklets include step by step instructions for the set of practices, which could be practiced for an hour daily by patients with different ailments. These are safe practices. The practices that could be harmful for the conditions have been carefully avoided based on the knowledge of the physiological effects of these practices and its expected effects on the disease. However it is safe for you to ask your doctor or medical advisor before you start practising these techniques. The ideal way to use this booklet is to keep this as a reference book after you have learnt them under the guidance of a yoga teacher trained in our system of yoga therapy.

The lists of practices mentioned in the contents are all safe. If you have more than one illness, you need to select the common practices from the list for all those illnesses (see our other volumes).

The complete list in the booklet would take more than one and half hour to practice. Start with a set of simple practices amongst these and gradually go on to achieve the capacity to perform the entire set.

The ideal way to plan your daily yoga practices is, to follow the set of one hour practice given under the practice modules given in the end of this book. Quicker benefits can be had if you can practice. QRT or IRT for 2 to 3 minutes several times in the day even at your work place. Pick up one physical practice, one breathing practice and one chanting that you like the most from the module and practice them (10 minutes) daily, twice a day at a fixed convenient time in addition to the early morning practice for one hour. Daily practice is mandatory. Physical practices have to be performed only in empty stomach i.e. 4 hours after a

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major meal or 2 hours after a small meal. Do not practice yogāsanās when you are very tired or during menstruation. Meditation and Nādānusandhāna can be practised even after a meal or during menstruation in women.

We are indebted to Sri. N.V. Raghuramji, Dr. Padmini Tekur, Dr. Bansode, Sri. Shakti, Sri. Amrit Ram and many other Yoga Therapists for their help in preparing this booklet.

DR R NAGARATHNA
DR H R NAGENDRA

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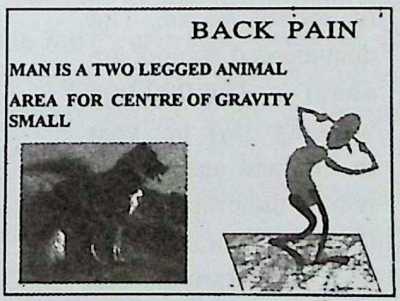
I

UNDERSTANDING BACK PAIN

A. INTRODUCTION

Most of us have suffered from backache at some time or other in our lifetime. Usually it is unpleasant and awkward, but not a desperate and serious problem. The commonest type of back pain is caused by some kind of mechanical stress or damage within the back which gets better fairly quickly. Poor posture, excessive stresses (physical and psychological), aging problems and mechanical damage may all contribute to back pain.

We should not be surprised that backache is so common when we understand the highly complex mechanics involved in the functioning of the spinal column. Since man became a biped, the centre of gravity has become narrowed to a small zone (the area of one foot) as compared to the wide area of the centre of gravity when we were four legged animals. The brunt of the weight of entire body has to be borne by the spinal column. While having to do this the spinal column also has to allow for enormous degree of flexibility. This is ensured by a highly complex organization of various anatomical structures such as bones, discs, ligaments, tendons, nerves, blood vessels and strong muscles. Any one of these structures could be injured or affected by diseases or subjected to exessive stresses and strains thus contributing to pain in most mobile parts of the spine namely the neck and the lumbar region.



This book is designed for persons with back pain and yoga therapists. It aims to

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show how the back works in health and disease as an introduction to our understanding of the yogic way of handling the problem.

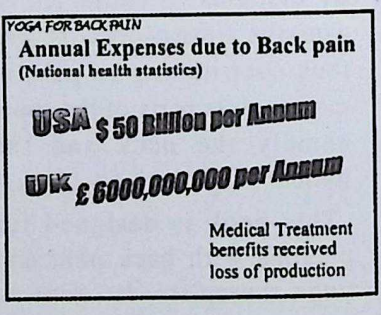
Historical Perspective

Lumbosacral pain has been a recognized human affliction for a long time. Hippocrates also talks about lumbosacral pain. In western medicine, we find the very first reports on naked eye discriptions of the normal and degenerate spine in the writings of vesalius in 1555. Virchow first described what is now known as a lumbar disc prolaplse in 1875. Middleton and Teacher first described lumbar disc herniation. Goldthwaite in 1905 described the result of manipulating the lower back of a patient who was thought to be suffering from a sacroiliac subluxation. The descriptions of different types of back pain, their causes and management are described in Ayurveda texts that are said tobe 2000 to 3000 years old.

A Growing Problem

Backache is remarkably common. At any one time some 30-40 per cent of the population have backache and between 80 and 90 per cent experience it at some time in their lives. It affects both sexes and all ages, from children to the elderly , but is most prevalent in the middle years.

The amount of working time lost due to back problems has increased enormously in recent years. The documented figures are about 100,000,000 working days per year in England and Wales, two or three times more than 20 years ago. In fact, this dramatic rise



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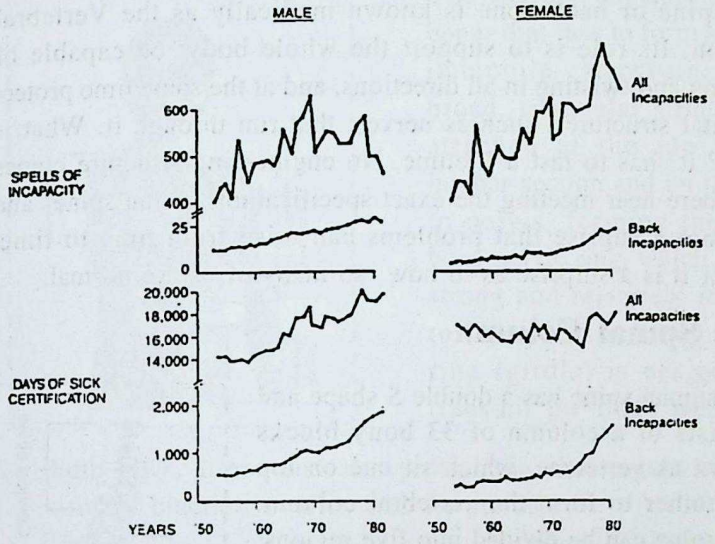
does not mean that more people are being injured at work but is a reflection of the awareness to seek medical help and a careful monitoring and documentation of such cases. The other major

Trends in sick certification



Annual statistics for England and Wales, United Kingdom (1950 - 1980).

reason for this increase in the incidence seems to be related to the sedentary stressful modern life style of hurry and speed.

In USA , national health statistics in 1995-96 reported that 14.3% of out patients (new visits) are due to low back pain and 1,29,00,000 visits/year are made for chronic low back pain. In addition 1,00,000 patients visit Chiropractors. 52,59,000 office visits are made for physiotherapy / year. 2.8% of severe hospitalizations are for back pain.

The total cost is calculated as being nearly £6,000,000,000 per year in UK and 16 - 50 billion dollars in USA, for the medical

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treatment provided, the benefits received, and loss of production - a phenomenal sum.

B. Structure and Functions of Spine

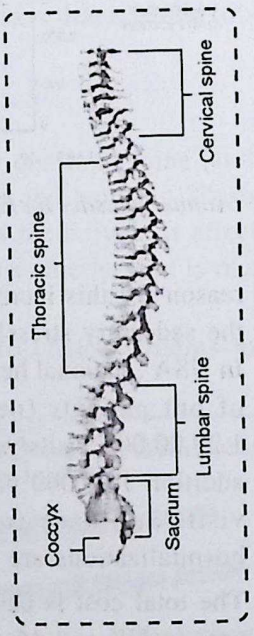
The spine or back bone is known medically as the Vertebral column. Its role is to support the whole body, be capable of bending and twisting in all directions, and at the same time protect the vital structures, such as nerves, that run through it. What is more? it has to last a lifetime. No engineering structure comes anywhere near meeting the exact specifications of the spine and it is not a suprise that problems can arise from time to time. Rather it is a surprise as to how so many of us are normal.

The Spinal Column

The human spine has a double S shape and consists of a column of 33 bony blocks known as vertebrae, which sit one on top of another to form the vertebral column. The spine can be divided into five regions:

i. The Cervical spine consisting of seven upper vertebrae, which support the head and allow the neck to move in all directions.

ii. The thoracic part consists of 12 vertebrae, each of them attached to two ribs, forming a rib cage to protect the vital organs such as the heart and lungs. Because the ribs in turn are connected to the sternum or breastbone, which is relatively rigid, these vertebrae are quite stable and not very mobile.



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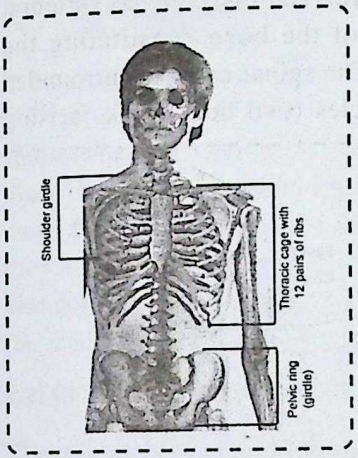
iii. The lumbar spine consists of five large vertebrae.These are broader and heavier than the other vertebrae since they have to support the large mass of the upper body. These lower vertebrae allow our body to bend forward and backward.



iv. The sacrum consists of five bones that fuse to form a single immobile structure. This broad, triangular structure is attached at the top to the lumbar section and on the side to pelvis, forming the solid bony pelvic ring, which is very strong and relatively immune to injury. This strong pelvic ring (girdle) is designed to transmit the body weight to both lower limbs and also protect the vital organs such as urinary bladder, ovaries and the uterus.

v. The coccyx is a collection of four small bones at the base of the spine and is a vestigial representation of the chain of tail bones of earlier mammals. The coccyx rarely gives us trouble unless of course we fall on it.

Functions of spinal column

Basically the spine has three main functions:

1. It houses the spinal cord, the vital cable linking the brain to all other parts of the body.
2. It is the body's principal scaffolding, supporting the skull and anchoring ribs, pelvis and shoulder bones.
3. It provides broad, bony areas for the attachment of the muscles, tendons and ligaments that permit body movement.

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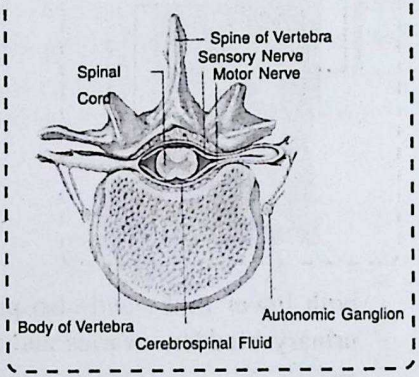
The Vertebra

Vertebrae have rather complicated bone designed for helping in all these three functions i.e. weight bearing, movement, and protection of the delicate spinal cord. The body of the vertebra, is the solid thick and broad part of the bone constituting the front or anterior part of the spine. The spinal canal is surrounded by a bony ring consisting of pedicles (two bony stalks arising from behind the body) and laminae (flat strips of bone behind). The laminae join posteriorly to form the spinous process of the vertebra. There are two lateral projections from the sides called transverse processes. These spinous and transverse processes provide sites for attachment of the strong and thick muscles and ligaments of the spine. The two lateral intervertebral foramina between two vertebral pedicles provide the passage for the spinal nerves to emerge out of the spinal cord that emerge out of the spinal canal.



Intervertebral Disc

The spine is able to bend and twist because there are flexible cushions or discs between the bodies of the vertebrae. Each disc is a flat structure with a jelly like centre called the ***Nucleus*** and an extremely strong outer covering made of tough fibrous tissue called the ***Annulus Fibrosus.*** The discs that separate two vertebrae act like shock absorbers for the spine, compressing when weight is put upon it and springing back to their original

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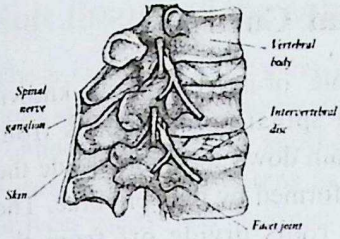
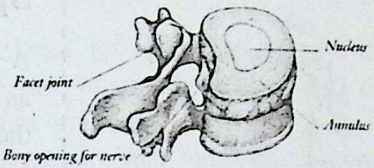


SIDE OF A SECTION OF THE VERTEBRAL COLUMN



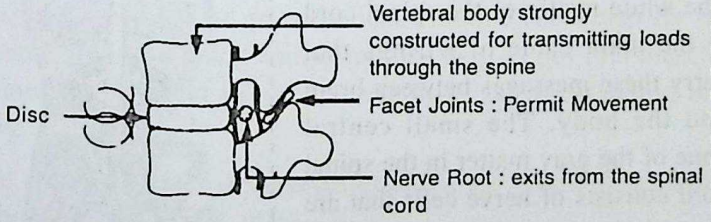
THREE QUARTER VIEW OF A VERTEBRA

shape when the weight is taken away. If the spine were without discs, the vertebrae would grind against one another and quickly wear out. Not only do the discs serve to separate the vertebrae, they also act as a hydraulic system, their gelatinous interiors dispersing pressure on the spine evenly in all directions along the back.

Inter Vertebral Facet Joints

The vertebrae are also joined to each other by pairs of small synovial joints, which lie at the back of the spine, one on either side. They can be affected by strain or by wear and tear. The bony swelling due to aging changes (osteophytes) at the margins of facet joints can cause pressure on nerves.

NORMAL VERTEBRAE AND DISC



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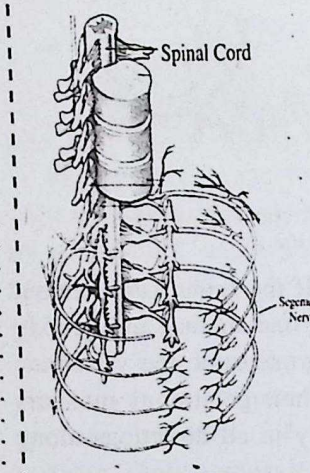
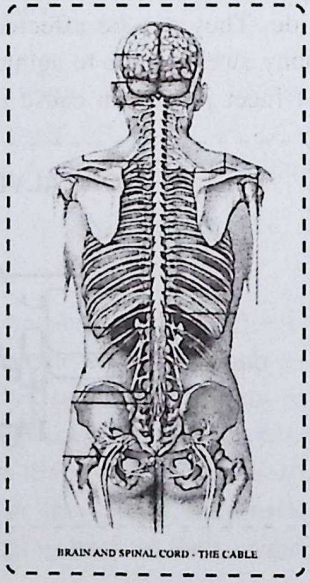


Spinal Cord

A 'cable' of nervous tissue, known as the spinal cord, extends from the brain down the spine inside the canal formed by the vertebrae. The nerve roots divide off from the spinal cord, run for a short distance within the canal itself and then emerge in pairs, one on each side, from the sides of the vertebral column through the intervertebral foramina to supply the trunk, the arms and the legs.

The nervous system in some ways resembles a telephone network carrying messages from the brain to various parts of the body and back again. Messages that pass down nerves make muscles contract and so control movements such as walking. Messages travelling up the nerves carry sensations that eventually reach your brain; so you experience sensations such as touch and pain. The white matter of the spinal cord is the main cable of wirings that carry these messages between brain and the body. The small central zone of the gray matter in the spinal cord consists of nerve cells that are involved in this message transmission as relay stations and reflex centres.


BRAIN AND SPINAL CORD - THE CABLE

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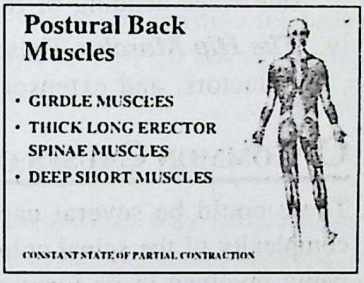
Soft tissues of the spine

These include the ligaments, cartilage, tendons, and muscles that hold up the spine. The ligaments are tough bands of tissues that connect one bone to another. The tendons connect muscles to bones; cartilage functions as a shock absorber between the bones in facet joints; and muscles provide the dynamic support for the entire length of the spine.

Spinal muscles

Back muscles play an important part in backache. They are the controllable elements, responding to the environment and controlled by our conscious thought processes. There are some 140 muscles attached to the spine. You could compare the muscles to tiny factories that convert chemical (food and oxygen are burned) into mechanical energy for movement. All spinal muscles are voluntary muscles that help in bringing about movements of the spine by alternate shortening (during contraction) and lengthening (relaxation).The mind, acting like a computer, controls movement, thinking and formulating messages to the muscles, which carry them out.



The spinal muscles also provide firm dynamic anchorage for the vertebrae. The long thick spinal muscles help as postural muscles to maintain the erect posture of the body during standing and sitting.

There are four groups of muscles essential for proper functioning of the back.

i. ***The Erector Spinae*** : these back muscles hold the spine erect and provide the posterior support for the back and get the

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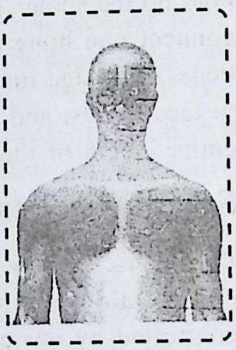
heaviest workout when you push or pull heavy weights, bend over, arch your back, or hold your spine erect.

ii. ***The Rectus Abdominus*** : These abdominal muscles consist of two straps or bands of muscles. They run from the rib cage to the sides and front of the pelvis, providing support to the the spine as well as supporting the contents of the abdominal cavity. These get their workouts when you do sit ups from lying down position.



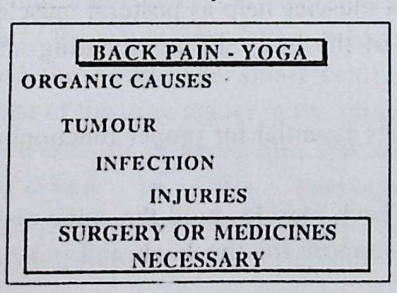
iii. ***The Lateral Muscles***: These muscles lie against the side wall of the trunk and help control the side ways bending of the spine.

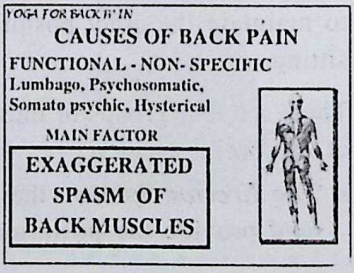
iv. ***The Hip Muscles***: These include the hip flexors, abductors, adductors, and extensors.

C. Common Causes of Back Pain

There could be several causes for back pain because of the complexity of the spinal column with large number of structures being involved in its functioning.The causes for back pain can be classified under two major headings namely organic and functional.

1. Organic causes are those in which a structural damage can be detected by tests such as X-rays, scanning, blood tests





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etc.These include injuries, infections, tumours, degenerative changes affecting any of the structures that go to form the spine.

2. The second major group of conditions that cause back pain are classified under functional or mechanical or idiopathic causes, where-in a structural damange cannot be detected and these are usually related to life style,postural defects,or psychological stresses.

According to yoga the causes for back pain can be classified under two headings i.e. *Ādhija* (stress born) and *Anādhija* (non-stress born). Adhija causes are those that are born out of mental stresses of any form. This probably corresponds to the functional catogory. The anādhija causes are those in which the disease is not due to only mental stress but there could be an outside cause. Injuries, infections and toxins that could be responsible for back pain are classified in this category. Let us now go through some of the common causes of back pain at length.

1. Back Injuries (Anadhija cause of Back pain)

Backache is one of the most common reasons why people have to take time off from work especially in heavy manual industries. At particular risk are workers in the building industry and nurses, as in both cases they often have to undertake heavy lifts in awkward postures.

It is often hard to separate cause and effect: in other words, do the stresses in the job cause the backache, or is the person unable to do heavy work because they already have a bad back?

It is clear that the back is a very complicated structure. When there has been some injury, back pain may arise due to several different reasons. Fortunately, most acute episodes of back pain get better without the need for specific forms of intervention. As a result, very detailed tests to determine the particular injuries causing problems are generally not required. However, when

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symptoms are more serious and prolonged it becomes important to determine exactly what is going wrong. Very careful examination and diagnostic tests, including imaging techniques (CT and MRI) may then become necessary.

Pain can develop in the back itself as a result of direct injuries to the ligaments, tendons, joints and other structures in and around the vertebral column, but because the same nerves that supply these tissues also supply the legs, patients may experience the pain as if it is arising from the legs. In addition, there may be pressure directly on the nerves, also producing pain, alteration in the sense of feeling, and weakness in the legs.

A serious accident with major injury of verebral column and the enclosed spinal cord, may lead to paralysis of the limbs. The number of limbs paralysed i.e. whether they can move their arms and not their legs, or whether all four limbs are paralysed, depends on where the spinal cord has been damaged. If the injury is in the neck, paralysis and loss of sensation can affect both the arms and the legs. However, if the injury is in the thoracic or lumbar segments below the arm level then only leg muscles are affected. In most back problems the nerves are damaged, but not the spinal cord.

i. Slipped discs

Most people have heard of a 'slipped disc' but it is a rather inaccurate name because discs cannot actually slip. They can wear out, split or burst. What happens is that, after some physical strain on the spine - often involving bending, twisting or lifting, the disc bursts or prolapses and the jelly like central nucleus is squeezed out through a split in the outer annulus.

We now believe that most discs that prolapse in this way, previously had some wear and tear changes and that the stress on the spine then triggered the problem. The particular stress

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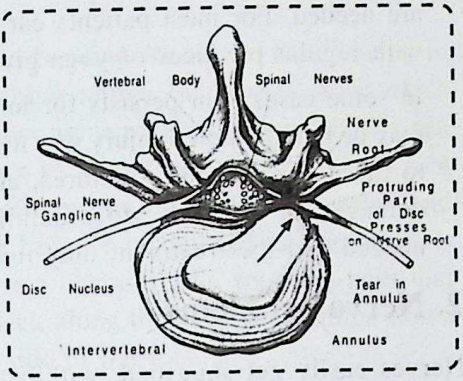
probably just acted as the 'final straw'.The jelly-like material, having been squeezed out, presses on the nerve running next to the disc, causing severe pain in the back that spreads down the leg and sometimes as far as the foot. The acute excruciating pain at the site of disc prolapse is also due to local inflammation and muscle spasm - the natural response of the body to any form of injury any where.



The pain caused by a burst disc can be very severe. Usually the symptoms will slowly get better and in majority of cases the pain disappears completely.

ii. Disc problems in the Neck

Discs can also prolapse in the neck, although this is less common than in the lower back. The neck is extremely stiff, and pain may shoot down one arm. Strength, sensation and reflexes in the arm may be lost.

iii. What is Whiplash injury?

This is common after a car accident, when the sudden impact gives no time for muscles to brace, and the head moves like a pendulum on the neck. In the simplest cases only ligaments in the neck are sprained, and the pain and stiffness that result are caused by the neck muscles going into spasm as a protective mechanism. If there are no other problems, a soft collar, pain relief, and occasionally physiotherapy are all that

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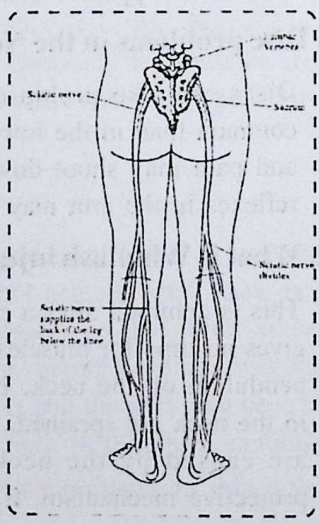
are needed. For most patients early return to normal activity with regular practices of yoga gives the best results.

In some cases pain persists for longer than six weeks, and it may be that the initial injury was more serious, causing damage to the discs or other structures, and has led to nerves being damaged or trapped. More detailed investigations may be needed and the treatment may involve surgery.

2. Nerve problems

Nerves easily get squashed, within the vertebral canal and as they emerge from the sides of the vertebral column, by damaged discs, facet joints, or vertebrae. When a nerve is squashed its ability to pass messages is affected. When this happens, you may experience pain or a sensation of numbness or tingling in the area supplied by the nerve, and the muscles that it controls in your leg or foot may become weak. The spinal cord transmits these sensations to the brain - it is a bit like interference on a telephone wire, producing unpleasant noices, and poor quality sound. In fact, current research indicates that it is a great deal more complicated than that. Changes within the spinal cord itself can affect the pain message. This may explain why some patients continue to experience widespread and prolonged symptoms when the original nerve damage has healed and there is little evidence of much wrong with the back.



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Sciatica

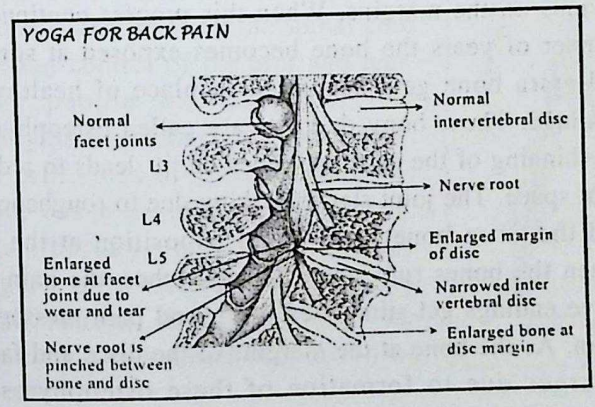
As the greatest weight and bending forces are experienced in the lower part of the lumbar spine, the nerves most often damaged are the fifth lumbar nerve root emerging out between the fourth and fifth lumbar vertebrae and the first sacral root which leaves the spine between the fifth lumbar vertebra and the sacrum. Pain arising because of damage to this nerve is known as Sciatica. This is a characteristic shooting pain that radiates from the lower back along the back of the thigh down to the outer or the inner side of the foot.

The exact site and line of trasnsmission of the pain helps the doctor to identify exactly which nerve has been damaged.

3. Spondylosis

i. What is Lumbar Spondylosis ?

Spondylosis, or wear and tear of the spine, is very common. Indeed, these changes are the normal aging changes that start around the age of about twenty five in all the mobile joints of the body. Most of us do not have pain all our life although natural slow aging changes of wear and tear do go on and on continuously. In almost all of us by the time we



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are middle-aged these changes may be visible on the X-rays of the spine. However aging changes occuring prematurely and progressing rapidly to give rise to problems needing medical attention is commonly seen in some persons because of excessive wear and tear during sports injuries. This is one of the main reasons why athletes are at the peak of their performance in their early twenties and may develop problems in their joints much more commonly than others.

The lower back bears the weight of your whole body, as well as anything that you are carrying, and does most of the bending and twisting. This is why wear and tear changes of the spine are most common in the lumbar region, and this condition is called lumbar spondylosis.

Lumbar spondylosis is most likely to occur at the lower levels, particularly between the fourth and fifth lumbar vertebrae (L4/ L5) and the fifth lumbar vertebra and the first segment of the sacrum (L5/ S 1), and may lead to Sciatica. It affects both the discs and the facet joints.

The process of wearing out or spondylosis begins as loss of material from the disc and the cartilage (the glistening lining of the facet joints). This wearing out starts as pitting on the surface of the cartilages or the disc which is initially more obvious on the margins. When this process continues over a number of years the bone becomes exposed at some points and extra bone gets deposited in place of healthy smooth cartilage. These bony deposits are called osteophytes.When the thinning of the cartilage goes on, it leads to reduction of joint space. The joint starts creaking due to roughened surface and the extra bone(osteophyte) deposition at the margins. When the bones rub against each other, the pain sensitive nerve endings get stimulated and send pain messages to the brain. As the bone at the margins of the discs and facet joints enlarges due to formation of these osteophytes making

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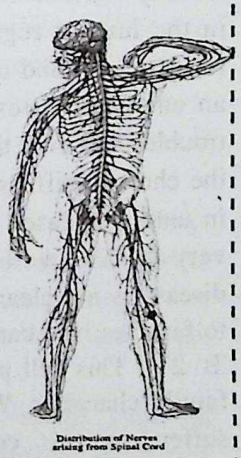
movement more limited, it leads to stiffening of the spine. It may also press on nerves and other structures causing pain. However, this is not as depressing as it sounds. The fact that you have these wear and tear changes does not mean that you are bound to get backache. Many people have quite severe wear and tear changes with few or no problems during their life time, whereas others with relatively minor changes suffer incapacitating bouts of pain.It appears that there are other factors that contribute to the severity of pain.We shall try to elaborate and understand the role of these other factors later under 'modern life style and back pain'.

ii. What is Cervical Spondylosis?

Wear and tear changes are extremely common in the neck, and are known as cervical spondylosis. They may cause no problems at all, or lead to neck pain with headache and/or arm pain. Neck movements are reduced, and some patients have a tender spot in the trapezium muscle, which lies between the neck and the shoulders. Again, the arms may become weak and lose their reflexes. There may be tingling or pins and needles in the arms. In the most serious cases, the distorted bone and ligaments can press on the spinal cord affecting control of the arm and legs. Many people who have cervical spondylosis also have low back pain. The principles of treatment are the same; use a collar, physiotherapy, yoga therapy, anti-inflammatory drugs, pain relief and early mobilisation. Surgery may be necessary for a small proportion of patients.



Distribution of Nerves arising from Spinal Cord

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These persons with cervical spondylosis may also experience dizziness, buzzing in the ear and pain behind the eyes. This is because of pressure on the vertebral artery which passes up from the lower part of the neck, threaded in the small holes in the transverse processes of cervial vertebrae to enter the skull and supply blood to the brain stem which carries the balance sensing nerve centers. When this artery is sqeezed due to pressure by the osteophytes and muscle spasm, the person experiences vertigo.

iii.Coccydynia

This is the name given to pain at the tail end of the spine, or the coccyx. Usually no cause for the pain is found. A soft cushion ring may be used to make sitting more comfortable, but the condition usually settles by itself with time.

4. Ankylosing Spondylitis (Bamboo Spine disease)

This is an uncommon disease affecting males more than females. Usually starts in twenties with a mild to moderate nagging pain in the lumbar region or hip that lasts for a few weeks. Pain recurring off and on in cold season or after unusual exercise or an emotional stress, it may go on becoming more and more troublesome over the years. The salient feature of this disease is the chronic stiffness in the hips and entire spine. Over the years in untreated cases the spine gets fixed into a hunch making life very difficult without mobility of the spine. The cause of this disease is not clearly established. Most of these persons belong to families who carry a particular type of cell protein called HLA 'B' 27 . This cell protein is not the cause of the disease but is a family character. We may find many persons in the family who suffer from this condition. The immune system is disturbed and causes inflammation in the facet joints of the vertebrae, hips,

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sacroiliac joints and other soft tissues around the discs.In the healing stage of inflammation, calcium gets deposited in the scar tissue resulting in bony fusion of the spine. In X-rays these zones of healing are seen as bony bridges between the bodies of the vertebrae and hence the name Bamboo spine disease. Emotional stresses may trigger or aggravate the episodes of flare up of pain. This points to the role of mind in the causation of this disease as described in psychoneuroimmunology, the branch of medical science that studies the effect of mind on the immune system.

5. Non-specific Back pain (functional causes)

Many people who have trouble with their backs experience brief episodes of acute pain that may spread to the buttocks or thighs from which they make a full recovery. During these attacks the back may also feel stiff and tender. Sometimes you may have tender areas over the spine or between the sacrum and the iliac bone of pelvis. When the symptoms are very severe the condition is called *Lumbago.*

If this happens in the neck a similar type of brief episode of acute neck pain going down the arms with marked stiffness is experienced (which may be labelled as acute stiff neck syndrome). The pain can last for a day or two or up to a couple of weeks each time and disappear completely. Sometimes it may persist or recur.

The symptoms are made worse by poor posture and heavy lifting. X-rays frequently show the presence of spondylosis, but surveys have revealed that these changes are often found in people who don't have any symptoms. It is therefore difficult to assess the part they have played in causing pain.

Although the cause is usually uncertain, terms such as lumbosacral strain and sacroiliac strain or Lumbago, acute stiff neck syndrome are often used. The term 'non-specific back pain'

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is preferable, as it does not suggest that we know the cause of your particular problem.

6. Life style stress and Back pain

Why is Back pain becoming more and more common in Modern man?

There are four major factors that go with the modern life style that are responsible for this increasing problem of back pain.

a. Muscles are weaker than our ancestors.

Modern technological advances has made life easy with tools, aids, gadgets and ever renewed transport facilities (cars and airoplanes) that have drastically reduced the need for physical activity. Today's life style can be managed most efficiently without using our muscles. Every thing can happen by pressing a button on a P.C. or a Palm top. This is responsible for lesser stamina in the muscles all over the body in general and the strong thick postural muscles of the spine in particular. We know that it is the regular activity that keeps any skeletal muscle strong and sturdy. The muscle power and stamina goes on increasing with increasing movement done in a systematically graded manner with enough rest in between. This is the principle used in any body building programme. Once the physical activity level reduces, the muscles start becoming weaker and weaker.

b. Wrong muscles are overworked.

Bad postures during standing or sitting (sloppy chairs) or sleeping (cushiony beds) are responsible for allowing the spine to go crooked. Wrong postures and curvatures of spine alter the line of weight transmission. This poses greater demands on some muscles that fall in this wrong line of weight transmission. These muscles (which are already weak) are now subjected to long

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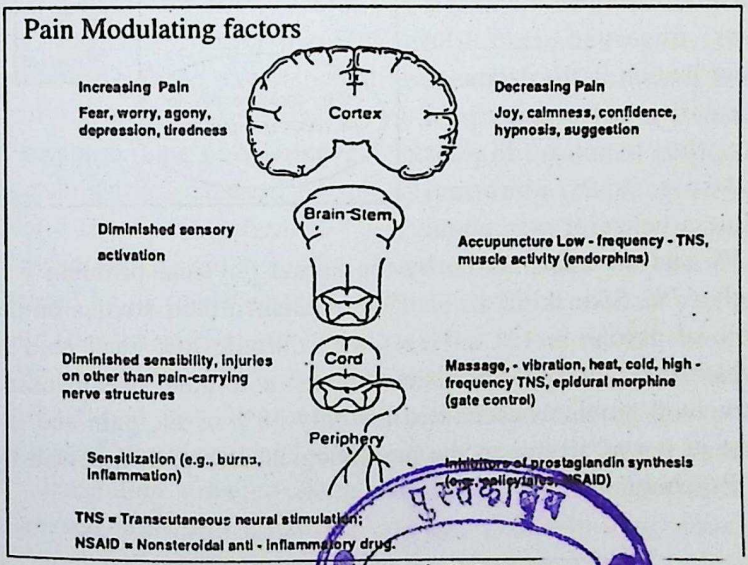
durations of activity in that they are made to remain in a state of partial contraction which they are not trained for. A muscle when held in a state of contraction for unused duration of time, it gets tired and when pushed beyond its capacity triggers off pain sensors resulting in back pain.

c. Repeated injuries due to unused exercise

After working hard all round the year in your office, you are looking forward to your long holiday away from hometown, where you would love to do your favourite sporting activity. The strain on the back starts even during your preparation for the holiday. The packing, loading, winding up the back log of office and house work , carrying travel kits are a bit too much for your untrained muscles. After reaching the holiday site you want to enjoy your sports. You are now prone to multiple sprains and strains, muscle pulls and small injuries. These soft tissue injures are most common in the neck and the lumbar spine.



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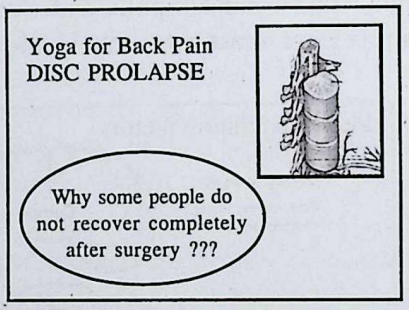
Whenever there is an underlying soft tissue or bony injury in the spine, the nature's way is to protect the part by not allowing that part to move, by spasm of the long paraspinal muscles.

Thus any pain in the spine due to under-lying injuries has almost a 50% contribution by the superadded postural muscle spasm. Acute injuries with even severe degree of pain would vanish with rest, local heat, painkillers etc. within one to four weeks. But the problem of recurrent and chronic pain is the major concern. This happens when you return to the same life style of sedentary working in wrong postures full of psychological tensions.

d. Psychological stress

i. The role of stress in chronic low back pain



In a survey conducted amongst sufferers of chronic low back pain of greater than three months, it was observed that the contribution to the degree of disability in low back pain by the psycho- logical distress with abnormal illness behavior was about 43% and the contribution by the actual physical problem was only 67%. Sikorski et al., in 1996 published their studies on the role of psyche in 131 subjects with chronic low back pain in which they concluded that the demonstrable bone or soft tissue structural problems accounted for only 38% of the pain and the rest of it was all due to the psychological stress, as assessed by a Psychiatrist.

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Table : Analysis of the causes of Disability in Chronic Low Back Pain

Main elements of illness	Extent to which these account for disability.
1. Physical severity	40 %
2. Psychologic distress	
* Abnormal illness behaviour	34 %
* Total identified	71 %

Owing to inaccuracies of clinical observation, it is unusual to be able to identify such a high percentage of any biological phenomenon.

ii. What is Stress

Stress is defined as the emotional and physiological responses to demanding situations. The competitive, progressive fast life style poses too many demands on the emotional and the physiological coping mechanisms. Repeated long standing demands on these physiological responses lead to a wrong habit resulting in hyper-sensitization of the frequently used channels of response. One of the major responses of this stress adaptation mechanism is increased muscle spasm. For example when you meet a friend and comment " Ai, why are you looking so much stressed and tensed today?", how did you make out that he is stressed by just looking at his appearance? Is it not that you saw your friend fretting and fuming with a frown on the face and stiffness all over his body? This is due to excessive contraction of the facial muscles and the postural muscles of the spine. Increased muscle spasm is the nature's protective response to the demanding situation along with many other changes such as increased heart and breathing rate etc. that help us to cope up with demanding situations. This will not be a problem if the period

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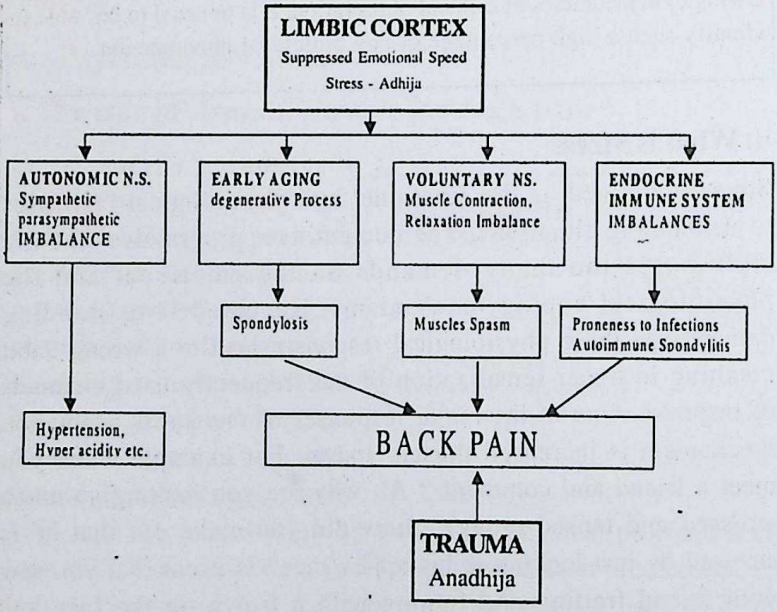
of stress is short and the person gets enough resting time after the demanding period. But today's life style is full of such demanding situations without any time for relaxation. Therefore these long standing stresses of any type demand the muscles all over the body tobe held in a state of increased contraction (spasm). This long standing spasm in the already weak postural muscles of the back triggers off the pain nerve endings in these muscles that causes persistent back pain.



PATH WAY OF LIFESTYLE RELATED BACK PAIN

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D. Basis of Yoga for Back pain

1. How does yoga understand the relation between life style and back?

According to yoga the causes of back pain can be classified as Adhija or Anadhija, i.e., functional or organic. The Anādhija (organic) causes include trauma, toxins, nutritional deficiencies and infections which contribute to only a small percentage of the cases of chronic back pain. The Adhija causes (functional causes) begin at the mind (Manas) level. Majority of the chronic cases of low back pain are due to non-specific causes (related to modern life style-adhija vyadhis). To understand how these stresses that begin at the mind level settle down in the body, we need to know the concept of five aspects of our body and the definition of stress according to yoga.

2. What are the five aspects of our existence ?

Not withstanding the sincere and subtle (atomic level) researches, the attempts to understand life as an offshoot of matter consisting of a conglomeration of atoms and molecules, are leading man to regions of great complexity. Decades of expensive research have yielded much less fruits than expected.

However, better understanding of life appears to be forthcoming with efforts directed towards fields of modern psychology and parapsychology. The fore runner of many of these efforts could be traced back to the work of Kirlian. Controversies apart, Kirlian photography triggered the interest of a large number of scientists and technologists all over the world. Investigations into the unknown regions of human existence started unravelling the mysteries of life. Parapsychology institutes have grown in number. Sceintists have started reconsidering their hypothesis that life is an emergence from matter. They recognize some existence beyond the physical body. In relating the experience

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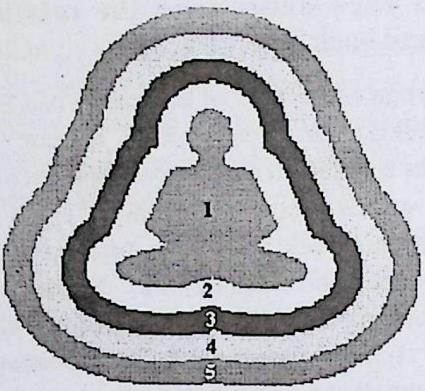
of the psychics, the terms human aura, etheric double, astral body, thought-forms, etc., have often been used.



Panca Kośa - five layered existence of human being

(1) Annamaya Kośa, (2) Prāṇamaya Kośa, (3) Manomaya Kośa (4) Vijnānamaya Kośa , (5) Ānandamaya Kośa.

i. Annamaya Kośa (material body)

In the tradition of Yoga and Upaniṣads, this concept of pancakośa is described in Taittireya upaniṣat where in the teacher Varuṇa, the father is guiding the student Bhṛgu in his search for reality. The son asks the father to tell him what is consciousness (Bramman). The father says it is the most fundamental stuff from which leads him on through hints to perform Tapas (internal research) to find out an experiential answer to the question. The son goes into silence and comes back to the father with an answer that every thing in the universe is made of 'Anna'(matter), comes from Anna, every thing in the universe is created, sustained and destroyed by Anna and dissolves into Anna. Father is very happy that the son has been able to arrive at one common principle of the external universe. This Anna (matter) aspect of our physical

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personality is called Annamaya Kośa. This is normally nourished by the gross food (also called anna) that we consume.

This is what the modern science also has understood. It has successfully unravelled the sublities of this Kośa. In his search towards reality of the most fundamental principle of this universe, a scientist started with the external gross world of solid matter which is simple and easy to see, divide, and do experiments with. This search led him to go on discovering smaller and smaller particles starting from elements, molecules, atoms, protons, neutrons and electrons etc. He further understood that it is all pockets of energy. Our body is therefore a permutation and combination of various chemicals (i.e., pockets of energy in various configurations). When they join together they form molecules, cells, tissues, organs, etc. These follow certain well defined laws of nature and are controlled by nervous (electrical) and chemical (hormone) mechanisms to bring about movement and action in each and every cell. Thus annamaya kośa is the physical frame which is the grossest of the five bodies.

ii. *Prāṇamaya Kośa* (life energy body).

Father Varuṇa says " my dear son, there is something more subtle than what you have discovered, please go on and carry on with your research". Bhṛgu after a long research comes back and says 'Oh, father, it is the prāṇa - the life energy, from which even the gross annamaya Kośa comes out'. Prāṇa the life energy described here is not the material electromagnetic energy spectrum known to modern science. All these energies like electricity, sound, light, radio, x-ray, etc. belong to annamaya kośa as they are bound by energy laws. The prāṇa described here is subtler than that. It does not follow the laws of the usual energies. It is described as,

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"स्वयमेव तानवं याति स्वयमेव पीनतां याति"

(Svayamēve tānavam yāti, Svayameva pīnatām yāti)

that which can increase or decrease by itself without any external agency. This Prāṇa is the basic fabric of this universe both inside and outside our body. A uniform harmonious flow of Prāṇa to each and every cell of the annamaya kośa keeps them alive and healthy. Prāṇa has the capacity to move into different areas of the body (annamaya kośa) depending on demand. For e.g., when you perform more brain work you need more prāṇa in the head region, when you walk you need more prāṇa in the lower limbs, etc. If the prāṇa flow to any organ increases inadvertently and without control, it can lead to dysfunction of that organ at the annamaya kośa.

iii. *Manomaya Kośa* (mind body)

Bhṛgu is now guided by his father to go back for Tapas. He returns after long panance and says "Oh. my Guru, I realise that Manas (mind) is the source of everything". This is called Manomaya kośa. This is the aspect of one's personality wherein the mind carries on its different functions such as perception(Manah), memory (Citta) and ego (Ahankāra).

Mind, which is defined as a conglomeration of thoughts responds to the input through sense organs. For example, you see a big red flower; eyes send the image to the brain and the mind (manas) perceives it as a beautiful rose. Within the next fraction of a second your memory(Citta) deciphers it as a very rare variety of rose which you wanted to see badly. The thought circulates in mind and citta which soon goes on to make you feel "Oh, it is so beautiful, 'I' like it, I love it, I want it". This component of the manomaya kośa in which this rapid recycling takes place and gathers momentum is called the 'Emotions' (Bhavana). This is characterised by

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LEARN TO COME OUT OF THE LOOP OF STRESS

feelings such as "likes or dislikes", " love or hate", backed by the heavy ' I ' (the ego) . It is this emotion that is the root cause of all human joy and distress. When the emotions become powerful, they start governing our actions against what is right. This 'going against the cosmic laws' leads to imbalances called Ādhi or Stress. Long standing Ādhis get pushed into prāṇamaya and annamaya kośa causing Vyadis. Manomaya kośa is our mental and emotional library, the subtler layer of our existance. Hence the statement 'You are what you think you are' which Bhṛgu realised as the basis of not only his own individual self but also as the basis of the entire creation.

iv. *Vijnānamaya Kośa* (intellect body)

As Bhṛgu reports to Varuṇa about this wonderful discovery, the master is happy and says " Please move on. you have just a few steps to go ahead, you are in the right direction." Now through intense long tapas, Bhṛgu realises that it is the Vijnāna (knowledge) from which the entire creation has come and that could be the final reality.

Vijnanamaya Kośa is the fourth aspect of our existance. We all have two minds. For e.g., when the manomaya kośa said that "It is a beautiful rose, I want to have it" and you started instructing your hands to pick up the flower, the inner mind said " Sorry, you cannot pluck that flower; it does not belong to you; it is from the neighbour's garden" and you stopped the action. This conscience within that continuously guides us to do a thing or not to do a thing is the Vijnānamaya kośa.

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It is this component of the mind that has developed in human race greatly that differentiates man from animals. Bhartrhari says:

आहार निद्रा भय मैथुनं च
सामान्यमेतत् पशुभिः नराणाम्
बुद्धिर्हि तेषां अधिको विशेषः
बुद्धिर्विहीनः पशुभिः समानः।

Āhara nidrā bhaya maithunan ca
Sāmānyametat paṣubhih narāṇām।
Budhirhi teṣam adhiko viśeṣah
Budhirvihīnah paṣubhih samānah॥

Bhartrhari brings out this point as to how the higher faculty, the Vijnāna continuously guides the manomaya kośa to get mastery over the basic instincts. Hence, in man we know that, even these basic insticts are all psychological. For example we have lost the cyclical behaviour of reflex (oestrus cycles of animals - heat) for sexual behaviour. This freedom element which is inbuilt in all human beings, guides him to discriminate what is "good and bad", "right and wrong", "useful and not useful" to move towards long term sukha (happiness). Thus, vijnānamaya kośa (knoledge base) is the discriminating faculty.

V. *Ānandamaya Kośa* (bliss body)

Varuṇa now directs the son to go back to tapas and this time Bhṛgu never returns. The master goes to check why the son has not come back. He was surprised to see that Bhṛgu is completely engrossed in deep Ānanda(bliss). There is no individual ' I ' of the Vijnāna or manomaya kośa, that can

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report to the father about his realisation. Bṛghu is now established in the knowledge of the final truth that Ānanda is the basic stuff of this universe from which every thing has been created.

This is called Ānandamaya kośa - the bliss layer of our existance. This is the most subtle aspect of our existance which is devoid of any form of emotions; a state of total silence - a state of complete harmony, and perfect health.

While, in Manomaya Kośa the creative power predominates, in Vijnānamaya Kośa it is the power to discern and descriminate. Bliss is embodied in Ānandamaya Kośa, the highest stage of evolution in the manifested existence. It is the subtlest among the five layers of existence. In his journey towards the Ultimate(also the state of perfect health), man crosses these kośas of existence one by one. Through analysis called 'Panca Kośas Viveka' (Knowing through experience one's five Kośas of existence) and the associated practices called 'Tapas' man transforms himself by gradually getting relieved from the bondages and constrictions of each Kośa. This is one of the methods of reaching the ultimate goal (Brahman - consciousness), enumerated and described in the Upaniṣads.

3. Yogic definition of stress

The erratic life style of excesses either in eating and drinking habits, excessive indulgences in any form of pleasures of life, work, sleep etc., begins in manomaya kośa and this is at the base of the majority of the cases of non organic causes of low back pain.Thus the seed of stress is in the manomaya Kośa.The distressful experience that we all experience as stress is an emotional state which could be triggered by different factors in different persons. The sages say that it is less useful to discuss what caused the stress than to know what is the state of your

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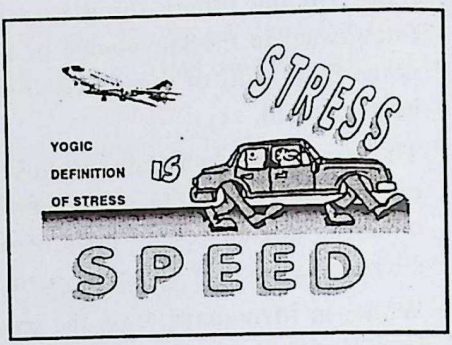

mind when you are stressed. If you try to relive any one of the stressful experiences of your life, you can see that during these states, the mind is heavily loaded with thoughts that are rushing with enormous speed. It is this exessive speed of the rate of flow of thoughts in the mind that you call as stress. Thus they go on to define stress as' a speeded up state of the mind'. The usefulness of this definition is that it leads you to the answer that if you learn to slow down the rate of flow of thoughts in the mind and become a master of this speed you have learnt to manage stress in the most efficient way.

4. Mechanism of Ādhija vyādhi

The problem of long standing stresses begins in the manomaya kośa and manifests initially only as psychological problems such as irritability, emotional lability, excessive smoking or alcohol, sleep disturbances, difficulty in making decisions etc. Over the years this starts disturbing the prāṇāmāya kośa and shows up as any one of the digestive problems such as poor appetite, dyspepsia, constipation, flatulence, gastritis etc., which are common precursors of most stress induced ailments. These Prāṇa imbalances go on fluctuating depending on the degree of stress. As this goes on for a few more years it shows up at the annamaya kośa as unexplained musculo-skeletal pains either as muscle spasms, soft tissue pains, sprains, cramps, or inflammations. A combination of some of these imbalances settles down in one perticular part of the body showing up as recurrent episodes of acute or chronic musculoskeletal pains with no organically detectable cause.

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According to ayurveda this imbalance at the prāṇāmāya kośa is described as an imbalance of the three dośas namely Vāta, Pitta and Kapha. The type of imbalance that is usually responsible for low back pain (or any rheumatic pain) is generally in the form of excessive Vāta Dośha.

5. How does the prāṇa imbalance select the target organ?

The factor that decides the prāṇa imbalance to show up as musculoskeletal pains is your basic personality type (prakriti). This in turn is decided by your family tendency or the genetic factor. An injured organ may also be the target for the stresses to settle down. For example, if you have a strong family tendency, you may have been getting episodes of cramps and sprains in back with acute stiff neck syndrome or a Lumbago quite easily whenever you had minor stresses or indigestion.This at some stage may persist as chronic back ache if you go through major stressfully demanding life situations.

Let us take the typical example of the pain in the neck and the back of a modern computer professional. A computer professional has all the three problems we have discussed earlier namely the sedentary life, wrong posture and the pressure of targets. The rapid pace of life demands long hours of work. An young energetic enthusiastic engineer in his twenties who is attracted by the big money that his job offers enters the company and sees that the others are smarter than him and are getting a big jump in their earnings once every three months. He is now faced with the challenge and decides to push himself up. The expectations both from his company and inner self push him into working long hours ignoring his sleep, food, and entertainment leave alone his own emotional needs. In this rush and joy of his achievements he moves on and on draining out

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his energies much beyond his capacity. Being young and proud of his own achievements his ego starts getting boosted up. He starts feeling oppressed and suppressed by the seniors. The supressed reactions along with the speed of competitiveness persist as uncontrollable speed in the manomaya kośa. Not well trained in handling this speed he drains out his energies just to manage the demands of the situation. This results in increased irritability, frustration, indecisiveness etc. Over the next few months or years he starts getting low back pains which may pass off with rest in bed for a few days. But this may come back and lead to chronic back pain.

Amongst all the emotions, it is the negative emotions such as anxiety, suppressed anger and frustration that drain out the maximum amount of pranic energy. This speed at the manomaya kośa leads to increased nervous activity in the emotional (limbic) cortical pathways. Repeated activation of the same pathways leaves him habituated to that track to such an extent that a small stimulus is enough to trigger off this loop of excessive activity in the nervous pathways almost like an involuntary reflex response. This speed now starts showing up at the physical level as excessive activity in many nervous pathways such as thesympathetic, parasympathetic, or voluntary nervous system.

Also the fast pace of life promotes early aging changes. These are the physical manifestations of the prana imbalances. It may take a few years before the ongoing imbalances start showing up in the annamaya kośa. Speeded up relentless activation of the skeletal muscles is the speed manifesting in the annamaya kośa as persistent muscle spasm. This in turn sets off large number of pain sensory nerve fibres to carry messages of persistent pain to the brain. Similarly the early aging change due to rapid pace of life manifesting as lumbar and cervical spondylosis is yet another manifestation of that speed.

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E. Management of Back pain

1. Prevention is better than Cure.

Preventive measures include -

i. Awareness and correction of postures while standing, sitting and lying down,
ii. Regular exercises and
iii. Stress management .

Yoga techniques involving slow body movements followed by practices of deep relaxation are useful in maintaining the strength and flexibility of the spine. Regular practice of a basic set of yoga practices of 45 to 60 minutes including Suryanamaskar, loosening practices, 8 to 10 asanas followed by deep relaxation, prāṇāyāma and meditation as recommended in our programme for promotion of positive health are useful in prevention of back pain.

2. During acute episodes

Rest in bed is necessary which could vary from a few days up to about 4 - 6 weeks, until the severity of pain comes down. Pain killers, muscle relaxants, cold or hot fomentation during this period of total bed rest and immobilization will help you to get relief from the acute pain.

The aims in the management of an acute episode of lumbar pain are:

- Rest the painful part so that the acute injuries to the disc and soft tissues or the bone can heal faster.
- Reduce the acute inflammatory response, which is responsible for local swelling and congestion. This inflammatory swelling stretches the soft tissues in the zone and causes irritation of the nerve endings. The local swelling of the tissues in this acute phase also adds to the pressure on the surrounding

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nerve roots that may trigger off shooting pain down the leg (sciatica) in lumbar spine or down the arm in case of cervical spine.

- Provide deep relaxation to the long thick para-spinal muscles that would be in protective spasm.
- Immobilise the part to releive the sharp pain that gets triggered by every small movement aggravating the protective muscle spasm and prevent them from relaxing.
- Rest the mind; when you have much pain the mind cannot rest and sleep will be disturbed. Once you cannot sleep, you start worrying about the pain, its future consequences, the business problems, office problems, family problems, nation's problems etc, etc,. which adds to aggravation of pain. Hence it is very important to rest the mind.

Conventional management techniques include a combination of immobilization, local heat or cold packs, nerve blocks, anti-inflammatory medicines, muscle relaxants, pain killers, and tranquilizers to give rest and comfort.

3. Yoga during acute episodes

During this acute phase of bed rest yoga has an important complementary role to achieve quick results. Yoga, basically is a trick to give very deep rest to the mind body complex and hence can be used even during the acute phase of back pain. As yoga emphasizes working mainly from the mind, once you start working with yourself to develop deep internal awareness and conscious relaxation and rest, you become confident to move on and on to manage yourself at later stages too. Lying down in bed has given you an opportunity and time to go within, and analyse your own life, understand the problems of your lifestyle, plan out a future time table for better management of the entire body - mind complex. To be

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able to help yourself through these techniques you need to work with a positive attitude as a participant in this holistic treatment regime rather than lying in bed subjecting yourself to only the doctor's treatment with scepticism and fear about yoga.

The eight step yogic relaxation for low back pain is based on the principle of stimulation and relaxation as a better way of improvement rather than just a relaxation. The recommended yoga during this phase (Set A and Set D page No. 123 & 129) has to be practiced once in two to three hours through out your waking hours.

4. Yogic Management of Chronic Back Pain

The basis of the integrated approach of Yoga therapy for Back Pain has already been discussed in this chapter. The details of how the specific practices are tobe practiced is described in Chapter II. The set of practices that you can select for daily regular practice is given in pages 123-131. For chronic low back pain there are two sets (B and C). We recommend you practice these two sets on alternate days.

Chapter III gives you a specific understanding of how yoga works in backpain. When practiced with this understanding the benefits will be quicker and complete.

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PRAYER

Namaskāra Mudrā

Sit in any comfortable meditative posture and adopt Namaskāra Mudrā. Close the eyes. Observe your whole body and breathing. Turn your mind inwards. Begin your yoga session with chanting the following verse from Upaniṣads praying for the welfare of the teacher and the student:

ॐ सहनाववतु सहनौ भुनक्तु सहवीर्यं करवावहै।

तेजस्विनावधीतमस्तु मा विद्विषावहै।

ॐ शान्तिः शान्तिः शान्तिः ॥

Om sahanāvavatu, Sahanou bhunaktu,
Saha vīryam karavāvahai ,
Tejasvināvadhītamastu, mā vidviṣāvahai
Om Śāntiḥ, Śāntiḥ, Śāntiḥ.

May he protect us both (i.e., the teacher and the student). May he nourish us both. May we both work together with great energy. May our study be enlightening and fruitful. May we not hate each other. Om Peace, Peace, Peace.

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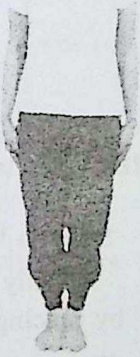
II

YOGA PRACTICES FOR BACK PAIN

STHITI (initial) and ŚITHILA (relaxation) postures for all Śithilīkaraṇa Vyāyāmas and Yogāsanās.

Initial Standing Posture: Tāḍāsana



- Stand erect with feet close together, knees together.
- Hands along the thighs with fingers stretched out.
- The legs, trunk and the head aligned in a straight line.
- Close the eyes.

Standing Relaxation Posture: Śithila Tāḍāsana

- Stand erect with legs about six to twelve inches apart, hands hanging freely by the side of the body with the shoulders collapsed.
- Make sure that the body is completely relaxed.
- Gently close the eyes.

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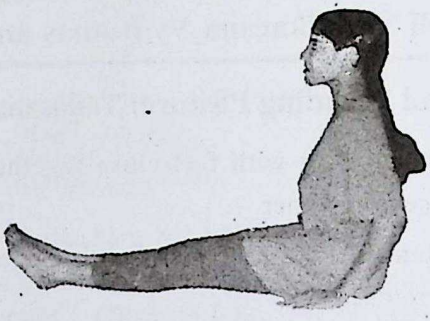
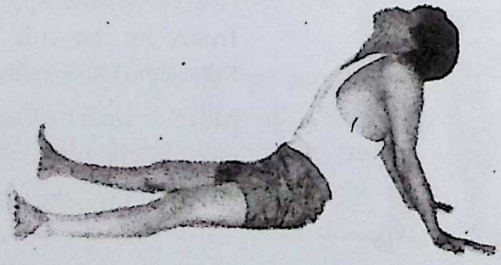
Initial Sitting Posture: Daṇḍāsana

- Sit with both legs stretched and heels together.
- Place the palms on the floor by the side of the buttocks.
- Make the spine, neck and head erect.
- Close the eyes.



Sitting Relaxation Posture: Śithila Daṇḍāsana

- Sit with legs stretched apart and relaxed.
- Slightly incline the trunk backwards supporting the body by placing the hands behind.
- Fingers point backwards.
- Let the head hang freely behind or rest on either of the shoulders.
- Gently close the eyes.



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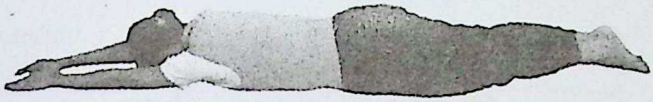
Initial Prone Posture

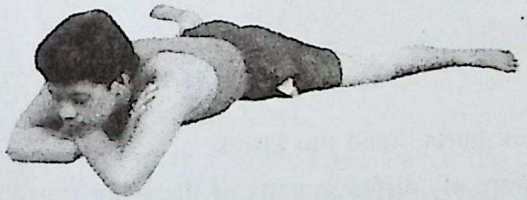
- Lie down on the abdomen with legs together, toes pointing outward and the soles of the feet facing up.
- Chin or Forehead touching the ground.



- Stretch the hands straight above the head, biceps touching the ears and palms resting on the ground.
- Close the eyes.

Prone Relaxation Posture: Makarāsana

- Lie down on the abdomen with the feet wide apart, heels and facing each other.



- Bend both the hands and place the right palm on the left shoulder and the left palm on the right shoulder.
- Rest the chin at the point where the forearms cross each other.
- Gently close the eyes.

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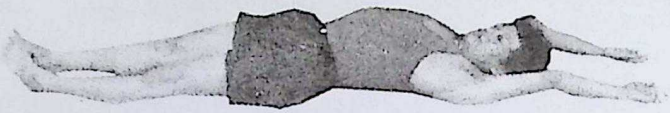
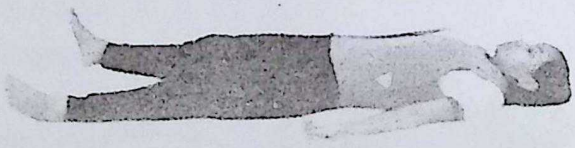
Initial Supine Posture

- Lie down on the back with legs together.
- Stretch the hands straight above the head, biceps touching the ears and the palms facing the ceiling.
- Close the eyes.



Supine Relaxation Posture - Śavāsana

- Lie supine on the ground with hands and feet apart.
- Slightly stretch the body and allow the whole body to relax completely with eyes gently closed.



- If your back hurts, bend the knees.
- Become aware of different parts of the body starting from toes to head. Feel the spread of relaxation in all parts of the body progressively.
- With regular long practice, the relaxation will become deeper, natural and spontaneous. Then the whole body is relaxed to the extent that one forgets the body. The mind experiences alertful rest.

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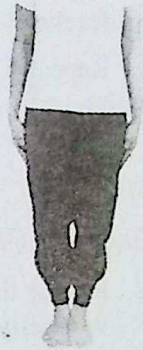
A. SPECIAL PRACTICES FOR LOW BACK PAIN

Standing

1. HANDS STRETCH BREATHING

Sthiti: Tāḍāsana

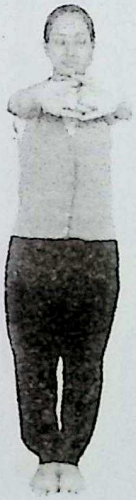


Practice

- Stand erect with feet together (heels together and toes 4 to 6 inches apart) hands relaxed by the side of the body.
- Gently bring your hands in front of the chest.
- Interlock the fingers and place the palms on the chest.
- Collapse and relax your shoulders.
- Close your eyes.

Stage 1 : **(Horizontal)**

- While inhaling, stretch the arms straight out in front of your body so that the arms are at shoulder level.
- At the same time twist the hands so that the palms face outwards.
- Fully stretch the arms, but do not strain.
- Now, while exhaling reverse the process and bring the palms back on to the chest.



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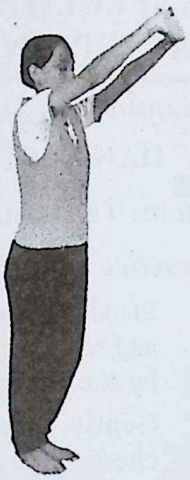
- Collapse the shoulders again.
- This is one round.
- Repeat 5 times.



Stage II : **(At 135^0)**

- Repeat the same movements now stretching the arms in front of the forehead at an angle of 135^0.
- Repeat 5 times.

Stage III : **(Vertical)**

- Repeat the same movements, this time stretching the arms vertically above the head.

- While moving up and down, the palms move close to the tip of the nose.
- Repeat 5 times.

Note

- *In stage III while the arms move up and down in the same plane of the body the hands with crossed fingers need to move very close to the tip of the nose.*
- *Collapse the shoulders at the beginning and end of each cycle.*
- *Maintain perfect awareness of the breathing.*
- *Exhalation should be longer than inhalation.*
- *If required, it can be practiced sitting in a chair too. Properly synchronize the breathing with hand movements.*

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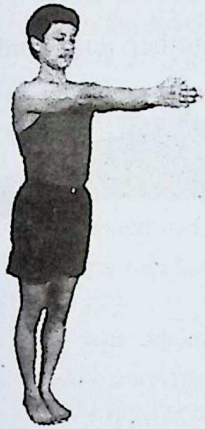
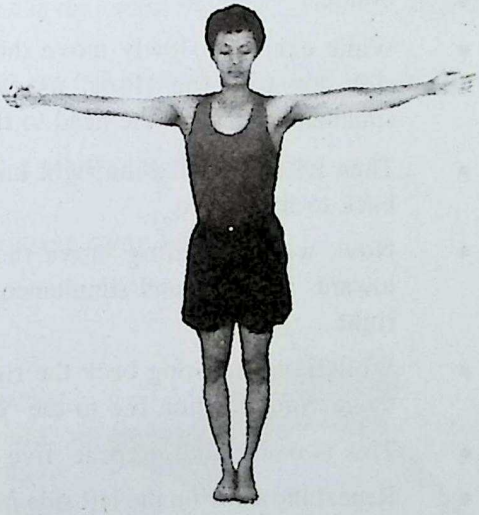
2. HANDS IN AND OUT BREATHING

Sthiti: Tāḍāsana



Practice

- Stretch out your arms in front, in level with your shoulders and bring the palms together.
- Inhaling spread your arms sideways in horizontal plane.
- While exhaling bring the arms forward with palms touching each other.



- Repeat 5 times, making your arm movements, continuous and synchronising with the breath flowing in and out rhythmically.
- Relax in Tāḍāsana. Feel the changes in the breath and the body, especially the arms, shoulders and the back of the neck.

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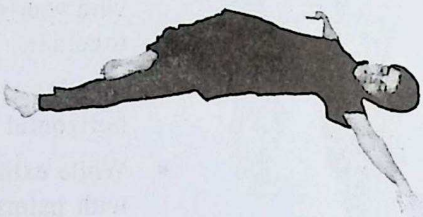
3. FOLDED LEGS LUMBAR STRETCH

Type -I (with one leg)

Practice

Sthiti: Supine Posture



- Lie down on your back with legs together and hands spread sideways at shoulder level.
- Palms are placed firmly pressed on the ground.
- Fold the right leg at the knee, placing the right ankle by the side of the left knee.
- Inhale.
- While exhaling slowly move the right knee to the right side towards the floor, as far as comfortable and simultaneously turn the head to the left as far as you can.
- Then inhaling ,raise the right knee up and turn the head back to the centre.
- Now, while exhaling move the right knee to the left towards the floor and simultaneously turn the head to the right.
- While inhaling bring back the right knee and the head to the starting position (i.e to the centre).
- This is one round, Repeat five rounds.
- Repeat the same on the left side i.e., with the left leg folded and right leg straight on the floor.

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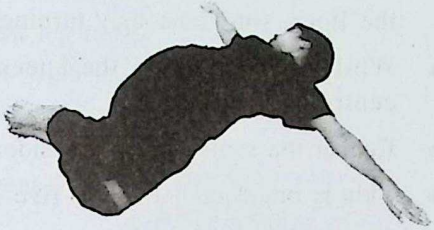
Type -II (with both legs)

Repeat as in Type -1 with both legs folded.

Note (For both Stages)



- *While practicing with single leg folded, the leg that is stright should remain undisturbed and remain perpendicular to the ground.*
- *Synchronize knee movement with breathing.*
- *Let the shoulders be firm on the ground; do not lift them during the practice.*
- *Be aware and concentrate on the lumbar region throughout the practice.*
- *While lowering the knee or knees towards right or left, feel the stretch in the lumbar region.*
- *You may feel the stretch in the lumbar region much more in Stage-II than Stage I.*
- *With continued practice, you will be able to perceive the stretch better with lesser pain.*

4. CROSSED LEGS LUMBAR STRETCH

Type -I (Right leg crossed over left leg)

Sthiti: Supine Posture

Practice:

- Lie down on your back with legs together and arms spread sideways at shoulder level, palms facing down and firmly resting on the floor.

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- Cross the right leg over the left by bending the legs at the knees and, wraping the right foot around the left ankle joint.
- Inhale. While exhaling lower the knees to the right towards the floor, simultaneously turning the head to the left.
- While inhaling bring the knees and the head back to the centre.
- Repeat the same on the left side.
- This is one round. Repeat five rounds.

Type -II (Left leg crossed over right leg)

Sthiti: Supine Posture

Practice

- Same as in Stage-I, except that now the left leg crosses over the right. Inhale.
- Now repeat the same. Practice 5 rounds in the same way as in Type -I.

Note:

- *If you cannot wrap one foot around the other ankle joint, just keep one leg crossed over the other.*
- *You should be able to feel more stretch here than in Practice 3.*

5. PAVANAMUKTĀSANA LUMBAR STRETCH

Sthiti: Supine Posture.

Practice

- While inhaling slowly raise the right leg up to 90^0 without bending the knee.
- While exhaling bend the knee, pull it towards the chest with the hands (fingers interlocked) and simultaneously raise the head trying to touch the knee with the forehead.

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- Maintain for a while feeling the stretch of the back muscles.
- Then, take the head to ground.

- Inhale stretch up the right leg to 90^0.
- While exhaling lower the right leg to the floor.
- Repeat the same with the left leg.
- This is one round. Repeat 5 rounds.
- Repeat the same with both legs without lifting the head.

Note:

- *Do not bend the knee while raising and lowering the leg, .*
- *Synchronize perfectly your breathing with the movement.*
- *While touching the knee with the forehead you should be able to feel the stretch at the lumbar region.*
- *Do it with closed eyes and maintain awareness in the lumbar region.*

6. SETUBANDHĀSANA LUMBAR STRETCH

Stage-I (Setubandhāsana breathing)

Sthiti: Supine Posture

Practice

- Lie supine with your legs together and hands by the side of the body.
- Fold both the legs placing the heels on the ground near to the buttocks
- While inhaling raise the buttocks and the trunk up as far as you can.

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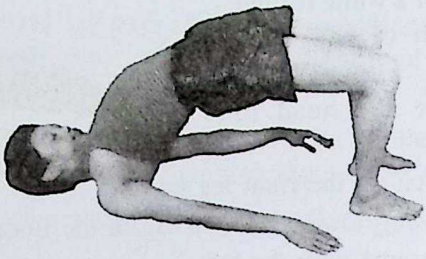


- While exhaling slowly lower them down to the floor.
- This is one round.
- Repeat five rounds.

Note:

- *Keep the hands on the ground all the time.*
- *Feel the stretch in the lumbar region while going up and release of the stretch while coming down.*
- *Synchronize the breathing with movements.*

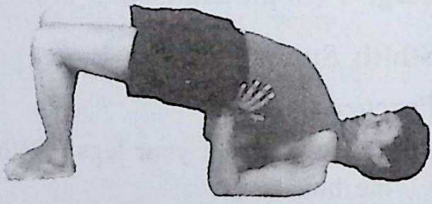
Stage-II (Seṭubandhāsana Stretch)

Sthiti: for Supine Posture

- Same as in Stage-I

Practice

- While inhaling slowly raise the buttocks and trunk up and place the hands under the waist to support the body well.



- Then as you exhale, slowly stretch the legs forward by sliding the feet inch by inch.
- Next, while inhaling slowly bend the knees again moving the feet backward inch by inch.

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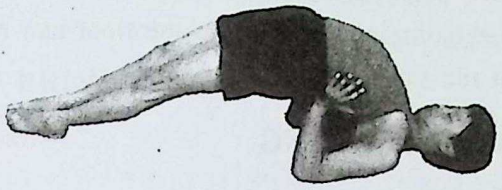


- Finally, while exhaling slowly lower the buttocks and the trunk on the floor.
- This is one round, Repeat 5 times.

Note:

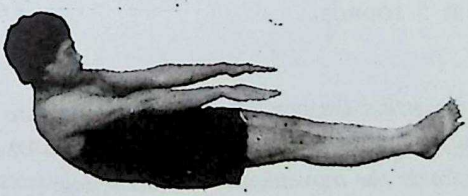
- *You must have firm support of your waist in order to be able to maintain the balance.*
- *Initially you may feel the pain in the elbows because of the weight of the body but gradually you will get used to it.*
- *When you are stretching the legs forward feel the increasing stretch in the lumbar region.*
- *If you find it difficult to practice "Setubandhāsana stretch", practice Setubandhâsana breathing only.*

7. DORSAL STRETCH

Sthiti: for Supine Posture.

Practice

- While inhaling, slowly raise the head, shoulders and body up to the dorsal part of the back, raise the arms up to shoulder level (parallel to the ground).



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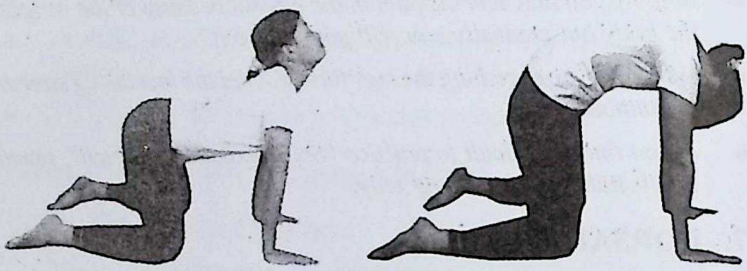
- Hold this position for a while.
- While exhaling come down to the floor and relax.
- Repeat the same movements five times.

8. TIGER BREATHING

Sthiti: Daṇḍasana

Practice

- Come to Vajrāsana.
- Lean forward and place the palms flat on the floor in line with the shoulders with fingers pointing forward. Arms, thighs and heels should be about one shoulder width apart. The arms and thighs are perpendicular to the floor.



- While inhaling raise the head and look at the ceiling.
- At the same time, depress the spine making it concave.
- While exhaling, arch the spine upwards and bend the head downward bringing the chin towards the chest.
- This constitutes one round of tiger breathing.
- Repeat 5 rounds.

Note

- *Before starting the practice ensure that you are comfortable while standing on "all-fours" (i.e., two hands and two knees).*
- *Co-ordinate the movements with breathing.*

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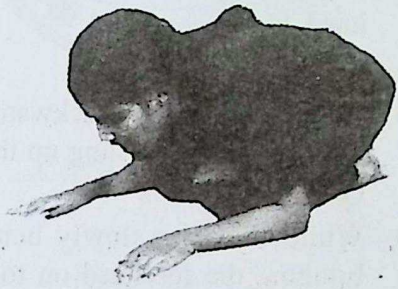
- *Keep the eyes closed and practice with awareness.*
- *Do not bend the arms or move the thighs forwards and backwards.*

9. RABBIT BREATHING

Sthiti: Vajrāsana

Practice



- Keeping the knees together, bend forward and rest the forearms on the floor, keeping the elbows by the side of the knees and palms flat on the ground.
- Maintain the head with the chin at a distance of about six inches above the ground. Open your mouth partially; Protrude the tongue partially and rest it on the lower set of teeth as the tip of the tongue just touches the lower lip.
- Gaze at a point about two feet on the ground in front of you.
- Breath rapidly panting like a rabbit, using only the upper part of the chest. Feel the air moving beautifully in and out of the lungs. Feel the expansion and contraction of the upper chest muscles. Continue for twenty to forty breaths.
- Close your mouth and relax in Sasankāsana. Stretch your hands forward with the forehead resting on the ground. Feel the relaxation of chest and thorax. Allow your breath to return to normal.

Note

- *Breathe rapidly through the mouth only, using the thoracic muscles.*
- *Make sure that the abdomen presses on your thighs, preventing any abdominal movement.*

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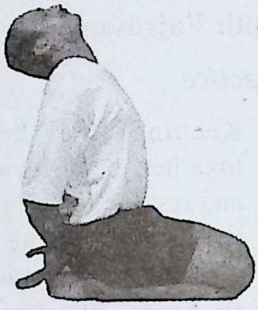
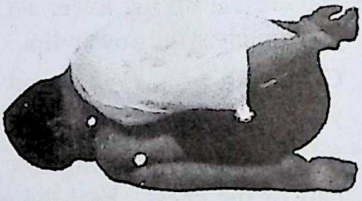
10. ŚAŚĀṄKĀSANA BREATHING

Sthiti: Vajrāsana

Practice



- Take the hands behind the back, hold the right wrist with the left hand.
- Relax the shoulders.
- While inhaling bend backwards from the waist opening up the chest.
- While exhaling slowly bend forward from the waist bringing the forehead on to the ground in front of the knees. Collapse the shoulders.
- While inhaling slowly come up to vertical position and then slightly lean backwards .
- This forms one round. Continue ten rounds slowly.



Note

- *Keep the shoulders collapsed.*
- *You can separate the knees as per your comfort to avoid unnecessary pressure on the abdomen and chest.*
- *Synchronize breathing with movement.*
- *Keep your eyes closed and maintain breath awareness.*
- *Hips should not be raised from heels while bending forward.*

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11. BHUJANGĀSANA BREATHING

Sthiti: for Prone Posture.

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Practice

- Place the palms near the last rib bone.
- While inhaling raise the head and trunk up to the navel with minimum support of the palms.
- While exhaling slowly bring the trunk and head back to starting position.
- This is one round. Repeat ten rounds.

c) Note:

- *If possible, keep the hands behind the back with the fingers interlocked and do the practice. But you must not exert.*
- *Synchronize movements and breathing with eyes closed.*

12. ARDHA ŚALABHĀSANA BREATHING

Sthiti: for Prone Posture

Practice

- Lie down on your abdomen, legs together, hands stretched out over the head and chin on the floor.
- Make fists of your palms with the thumb tucked inside and place them underneath the thighs.

Type -I (Ardlıa Śalabhāsana breathing)

- While inhaling raise the right leg up as far as comfortable without bending the knee.

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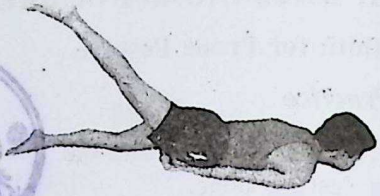
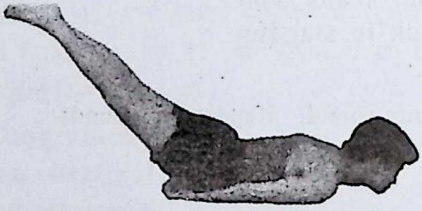
- While exhaling return the right leg back on to the floor slowly.
- Repeat with the left leg in the same way.
- This is one round, Repeat ten rounds.



***Type* -II** (Śalabhāsana breathing)

- While inhaling, this time raise both legs together as far as you can.



- While exhaling bring them back on to the floor slowly.
- This is one round.
- Practice ten rounds.

c) Note:

- *Take firm support of your fists while raising one leg or both legs. Accordingly, place the fists so that you can take maximum support.*
- *Do not bend the knees at all.*
- *In case of Ardha Śalabhāsana, the leg on the floor should be relaxed and straight.*
- *Do not strain or exert yourself.*
- *Synchronize the movement and breathing , closed eyes and breath awareness.*
- *Keep your eyes closed through out the practice.*

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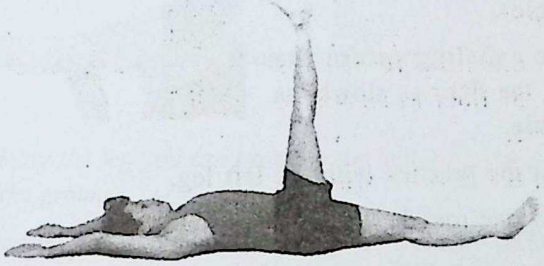
13. STRAIGHT LEG RAISE BREATHING

Stage I : Alternate legs

Sthiti: Supine Posture

Practice

- While inhaling slowly raise the right leg without bending the knee, as far as comfortable (up to 90^0, if possible).
- While exhaling return the leg to the floor as slowly as possible.



- Repeat the practice with the left leg.
- This is one round. Perform 10 times.

Note

- *On days when the back is very painful, if you need, you can keep the arms by the side of your body with the palms facing the floor at any convenient position or at shoulder level.*
- *Do not bend the knee through out the practice.*
- *Do not disturb the leg lying straight on the ground in order to be able to raise the other leg further.*
- *Even if you can, do not raise the leg beyond 90^0.*
- *Perfectly synchronize the breathing with leg movements.*
- *Maintain perfect breath awareness during the practice.*

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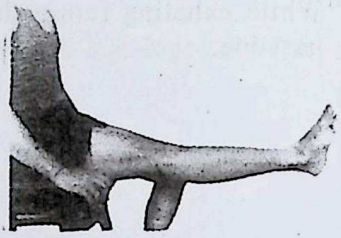
13a. STRAIGHT LEG RAISE BREATHING (sitting in the chair)

Stage I : Alternate legs

Sthiti: Supine Posture

Practice



- While inhaling slowly raise the right leg without bending the knee, as far as comfortable (up to 90^0, if possible).
- While exhaling return the leg to the floor as slowly as possible.
- Repeat the practice with the left leg.
- This is one round. Perform 10 times.

Note

- *Perfectly synchronize the breathing with leg movements.*
- *Maintain perfect breath awareness during the practice.*

14. SIDE LEG RAISING

Sthithi: Supine Posture

Practice

- Lie down on left side, with the head resting on folded left arm. and support the back of the neck with the left hand.
- Place the right hand on the right thigh or in front of the chest.
- Keep the whole body as straight as possible.
- While inhaling slowly raise the right leg as high as possible without bending the knee. Stretch out the toes.

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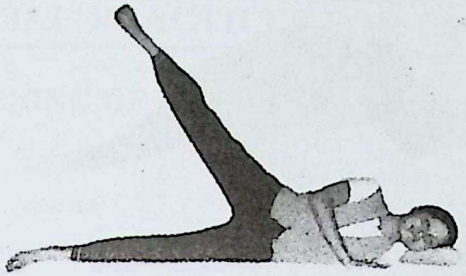

- While exhaling, slowly lower the right leg.
- This is one round.
- Repeat 5 times.
- Repeat the same practice 5 times on the left side..

Note:

- *While raising the leg you can maintain the balance, by pressing the palm on the ground.*
- *Feel the strong stimulation of the lateral stretch at the lumbar region.*
- *In one round of practice, one provides a good stretch to the lumbar region.*
- *To balance the body is a little defficult in this practice. Try to get the balance by adjusting the position of the arm below the head.*
- *For better effect, synchronize body movements with inhalation and exhalation.*

15. SIDE LUMBAR STRETCH

Sthiti: Supine Posture

Practice

- Lie down on the left side of the body.
- Hold the back of the neck with the left hand.

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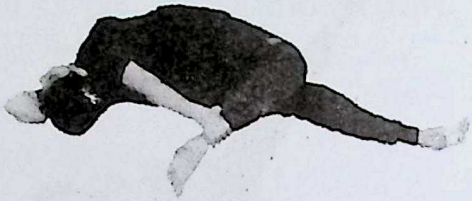
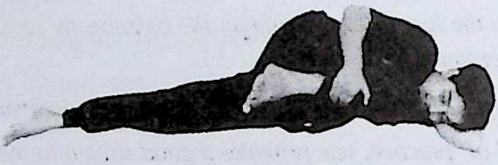


- Bend the right leg at the knee and hold the right ankle with the right hand behind the buttocks.
- While inhaling move the right thigh backwards as for as possible by pulling the right foot with the right hand and at the same time, bend the head backwards arching the spine, keep the hand straight.



- While exhaling bring the right thigh forward on the chest with the knee bent and right hand holding the right ankle.
- Bend the head forward in the Pavanamuktāsana style trying to touch the forehead to knee. This is one round. Repeat five rounds.
- Repeat the same on the other side.

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B. SPECIAL PRACTICES FOR NECK PAIN

1. LOOSENING OF FINGERS

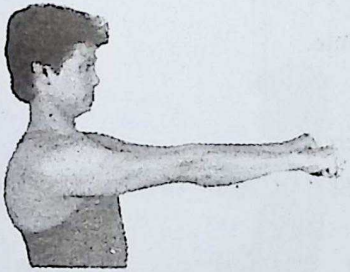
Type - 1

Sthiti: Dāṇḍāsana

- Hold both the arms straight in front of the body at the level of shoulders, with the hands open and palms facing down.

Practice

- Stretch the fingers as wide apart as possible. Tense them.



- Now close your finger to make a tight fist with the thumbs.
- The fingers should be slowly wrapped around the thumbs.
- Again open the hands and stretch the fingers.
- Repeat 10 times.

Note

- This can be practiced even in vajrāsana or cross legged sitting position, or sitting on a chair or in Tāḍāsana.
- Breathing: inhale on opening the palms and exhale while closing them

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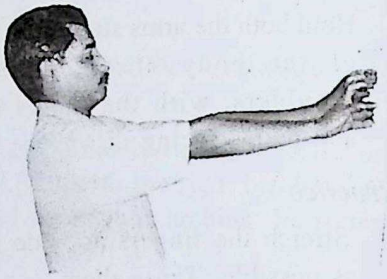
Type - II

ANGULI ŚAKTI VIKĀSAKA

Sthiti: Tāḍāsana

Practice



- Throw out your arms in front, keeping them parallel to the ground at shoulder level.
- Simultaneously give the fingers of both arms the shape of the hood of a cobra.
- Now, stiffen the entire length of the arms from the shoulder joints to the finger tips as much as you can so that they start trembling.
- Maintain this for about a minute.

Note

- *Tighten the arms until they start trembling.*
- *If you can not hold the arms trembling for a minute, hold it as long you can.*
- *Repeat it a few rounds.*

2. LOOSENING OF WRIST

Type - 1

Sthiti: Dāṇḍāsana

- Hold both the arms straight in front of the body at the level of shoulders, with the hands open and palms facing down.

Practice

- Inhale and Bend the hands from the wrist as if you are

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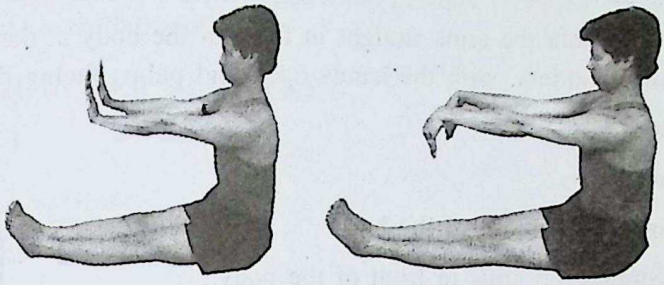
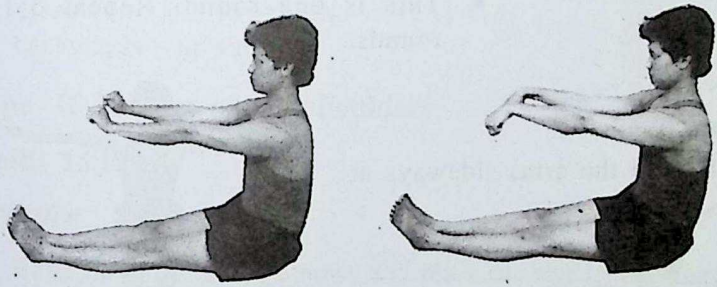
pressing the palms against an imaginary wall, with the fingers pointing the ceiling.



- Exhale and bend the hands vigorously from the wrist so that the fingers point towards the floor.

Type - II

Repeat as in Type-I with fingers folded on to form tight fists.



Note:

- *Keep the elbows straight throughout the practice.*
- *Do not bend the knee joints or finger.*
- *Keep the back, neck and head straight and still.*

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3. LOOSENING OF ELBOWS

Sthiti: Dāṇḍāsana

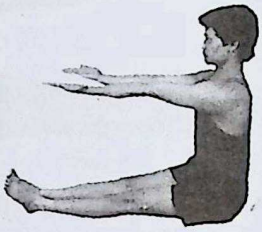
- Hold both the arms straight in front of the body at the level of shoulders, with the hands open and palms facing down.

Practice

Type - I

Arms in the front of the body

- Stretch the arms in front of the body.



- The hand should be open with the palms facing up.
- Bend the arms at the elbows and touch the fingers to the shoulders
- Straighten the arms again.
- This is one round. Repeat 5-10 rounds.

Type - II

Arms at sides.

- Extend the arms sideways at shoulder level.

- Keep the hands open, facing the ceiling.
- Exhale and bend the arms at the elbows and touch the fingers to the shoulders.
- Inhale and straighten the arms sideways.
- This is one round.
- Repeat 10 rounds

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Note:

- *In both I and II the upper arms remain parallel to the floor and unmoved.*
- *Can be practiced in cross legged sitting position, vajrasana, sitting in a chair or in Tāḍāsana.*

4. SHOULDER ROTATION

Type - 1

Sthiti: Tāḍāsana

Practice

- Rotate the shoulder girdles in a circular movement.
- First bring the shoulders forwards, then upwards, backwards and downwards (i.e., back to Tāḍāsana).
- This is one round. Practice 5 rounds slowly.
- Repeat 5 rounds slowly in the opposite direction i.e., forwards - downwards - backwards - upwards .

Type - II Fingers on the shoulders

Sthiti: Tāḍāsana

Practice

- Bend the arms at the elbows and place the tips of the fingers on top of the shoulders.
- Bring the elbows forwards and if possible let them touch each other.
- Now, start rotating the elbows (and thereby the shoulders) upwards, then backwards and downwards.
- Inhale during backward movement of the shoulders and elbows.

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- Exhale during forward movement of the shoulders and elbows.
- Synchronize the movements with breathing.
- This is one round.
- Practice five rounds.
- Repeat the same practice 5 rounds in the opposite direction.
- Stand in Tāḍāsana and relax.

Note

- *Keep the fingers always in contact with the shoulders.*
- *Rotate the elbows in bigger and bigger circles gradually.*
- *Don't strain yourself at any point of time.*
- *Always try and let the elbows touch each other when they are in front of the chest.*
- *You can practice this sitting in a chair if you cannot do it in Tāḍāsana.*
- *Keep the body firm and .*
- *steady and face relaxed.*

5. NECK BENDING

Sthiti: Daṇḍāsana

Practice

Type - I

Forward - Backward

- Slowly move the head forwards while exhaling and try to touch the chin to chest. Feel the stretch of the back neck muscles behind during extreme forward bend.
- Then move the head as far back as comfortable with inhalation. Feel stretch of the front neck muscles.

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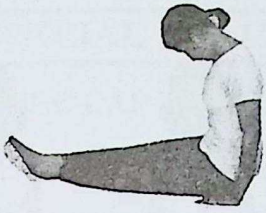
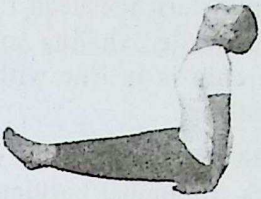
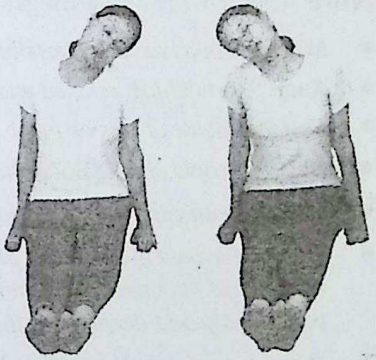




- Feel the stretch of the muscles in front and back of the neck during the extreme position of bending
- Repeat 10 rounds.

Type - II

Right and Left bend



- Keep the head upright with eyes closed.
- Gently bend the head to the right while exhaling so that the ear comes close to the shoulder.
- Then slowly inhale and come back to normal position.
- Slowly exhale and bend the head to the left in the same fashion.
- Come back to normal position with inhalation.
- This is one round. Repeat 10 rounds.

Type - III

Right and Left

- Keep the head upright with eyes closed.

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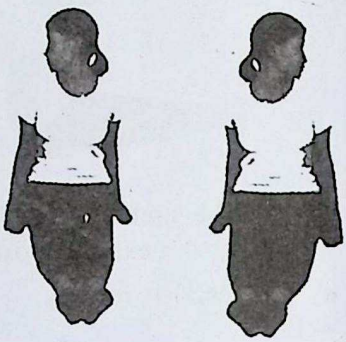
- Gently turn the head to the right while exhaling so that the chin is in line with the shoulder.
- Then slowly inhale and come back to normal position.
- Slowly exhale and turn the head to the left in the same fashion.
- Come back to normal position.
- This is one round. Repeat 10 rounds.



Note (For all the three Stages)

- *Move the head as far as possible. Do not over strain.*
- *Keep the shoulders relaxed and steady.*
- *Feel the release of tension in the neck muscles and the shoulder muscles.*
- *Elderly people should not go to extreme positions.*
- *Persons with cervical spondylosis should avoid during acute pain.*
- *If you have pain at any stage, stop in that position for a while. As you bring your complete awareness to the area of pain, start breathing consciously and deeply and then continue the movement.*
- *It can be practiced standing in Tāḍāsana or sitting in a chair, or in Vajrāsana.*

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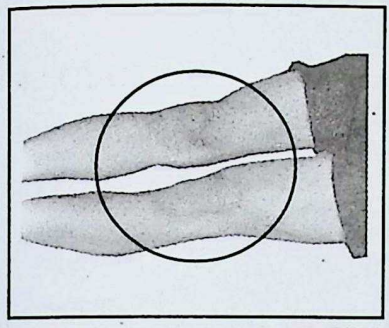
C. SPECIAL PRACTICES FOR KNEE PAIN

1. KNEE CAP TIGHTENING

Sthiti: Daṇḍāsana



Practice

- Close your eyes and bring your awareness to the knees.
- Slowly pull the knee caps upwards and then release them.
- Repeat this practice 20 times with normal breathing.

Note

- *Do not practice mechanically. Practice with full awareness.*

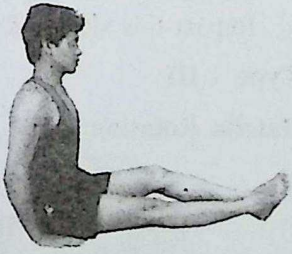
2. SITTING POSITION LOOSENING

Sthiti: Dandāsana

- Close your eyes and become aware of the knee joints.

Practice

- Move the knees alternately up and down not lifting them too much.
- Repeat this movement 20 times or more.
- During this practice, feel the relaxation and loosening of the knee joints.
- Stop the practice and relax for a while.



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Note:

- *Move the knees up and down so that your heels do not move forward or backward. They remain where they are.*

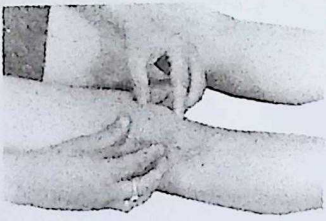
3. PATELLA MOVEMENT (Passive)

Sthiti: Dandāsana

Practice

Type - I

- Bring the hands to the right knee and catch the patella with both hands.



- Slowly, push the relaxed right knee cap (patella) forwards with both thumbs, keeping the fingers around the kneecap for support.
- Then, slowly pull it backwards with the fingers of both hands. Repeat this movement carefully 10 times.

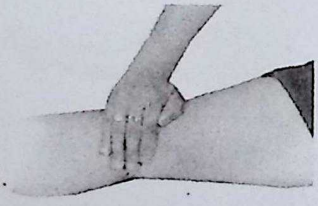
Type - II

Right & Left Movement of patella

- Next, move the right kneecap to the right and then to the left alternately with the fingers of both hands.
- Repeat this slowly & gently 10 times.

Type - III

Patella Rotation



- Finally, cover the right knee cap with the right palm and rotate it clockwise and anti-clockwise 10 times each giving it a gentle massage.

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- Repeat all the three types of exercises with the left knee cap.

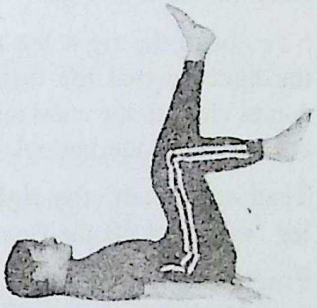
Note:

- *It becomes more effective if you can synchronize the movements with deep and slow breathing: Inhale during movements (forward and backward or right & left) and exhale while relaxing.*

4. CYCLING

Sthiti: Supine Posture.

Practice



- Slowly raise both legs to 45^0 and then to 90^0 position.
- Then start moving the legs in the air as if you are cycling.
- Gradually increase the speed.
- Then change the direction.
- Slowly stop the practice after 20 rounds in each direction, keeping the legs at 90^0 position.
- Now, lower the legs to 45^0 and then back on to the ground.
- Lie down in Śavāsana & relax.

Note:

- *The feet must draw a complete circle to have proper cycling movement.*
- *Focus on the knee joints.*

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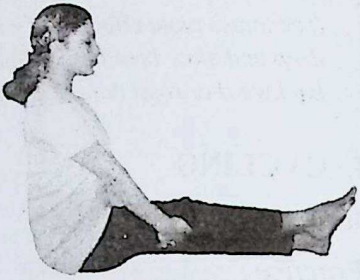
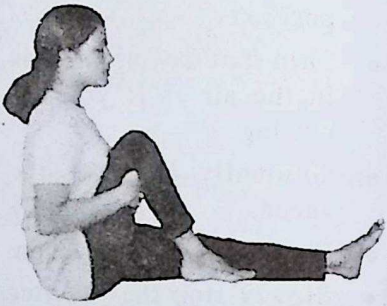
5. KNEE BENDING

Sthiti: Daṇḍāsana

Practice



- Bend the right knee and clasp the right thigh with the hands under them.
- Now straighten the right leg by pulling up the knee cap so that the right heel is off the floor.
- Keep the arms straight.



- Now, bend the right leg at the knee so that the thigh comes close to the chest and the heel near the buttocks.
- Then straighten the right leg with heel off the floor.
- Practice with normal breathing.
- This is one round. Practice ten rounds.
- Repeat the same practice ten rounds with the left leg.

Note

- *Bring the awareness to the knee joint during the practice.*

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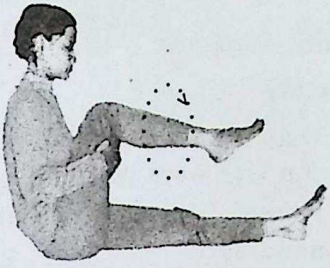
0. KNEE ROTATION

Sthiti: Daṇḍāsana

Practice



- Lift up the right thigh.
- Bring the right knee to 90°.
- Support the thigh with interlocked hands.
- Keep the right leg parallel to the ground.
- Now, rotate the right lower leg around the knee joint five times clockwise and five times anti-clockwise.
- Practice with normal breathing.
- Bring back the right leg down on the floor.
- Now repeat the same with the left leg.

Note

- *While rotating allow the leg below the knee to hang freely*
- *You can do this, even sitting in a chair or at the edge of a cot.*
- *With this practice of Knee rotation, there is no risk of injuring the knee joint.*

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D. YOGASANAS

1. ARDHAKAṬI CAKRĀSANA

Standing Postures

Sthiti: Tāḍāsana

Practice

- While inhaling, slowly raise the right arm side ways up.
- At the horizontal level turn the palm upwards.
- Continue to raise the arm with deep inhalation vertically until the biceps touches the right ear, palm facing left side.
- Stretch the right arm upwards.
- While exhaling bend the trunk slowly to the left.
- The left palm slides down along the left thigh as far as possible.
- Do not bend the right elbow or the knees.
- Maintain for about a minute with normal breathing.
- while coming back slowly to vertical position inhale and stretch the right arm up.Feel the pull along a straight line from the waist upto the fingers.
- Bring the right arm down as you exhale to Sthiti position.
- Come back to Tadasana Sthiti.
- Repeat on the left side by bending towards the right side.

Note

- *Bend laterally. Do not bend either forwards or backwards.*

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2. ARDHA CAKRĀSANA

Sthiti: Tāḍāsana

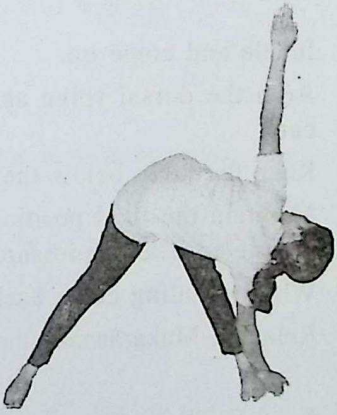
Practice

- Support the back at the waist by the palms, fingers pointing forwards.
- Inhale and bend backwards from the lumbar region. Drop the head backwards, stretching the muscles of the neck.
- Maintain for a minute with normal breathing.
- Return to Sthiti.
- Relax in Tāḍāsana.

3. PARIVṚTTA TRIKOṆĀSANA

Sthiti: Tāḍāsana

Practice



- While inhaling spread the legs apart by about a meter by moving the right leg away from the left . Simultaneously raise both hands and bring them parallel to ground.
- While exhaling, the right hand is taken down to the ground on the outside of the left foot, while the left arm is raised up to vertical position.
- Turn the face up to look at the raised hand.

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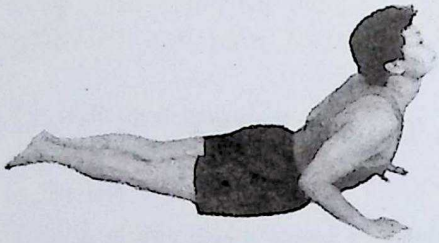
- Maintain at the final posture for 1 minute with normal breathing.
- Return to sthiti and repeat the same on the left side.

4. BHUJANGĀSANA

Sthiti: Prone Posture

Practice

- Bend the arms at the elbows and place the palms beside the lower chest at the level of the last rib exerting least pressure on the palms.
- Keep the elbows close to each other and let them not spread out.



- Inhale and come up.
- Arch the dorsal spine and neck backwards as far as you can.
- Keep the body below the navel in touch with the ground.
- Maintain the final position with normal breathing for one minute with least pressure on the palms.
- While exhaling come back to Sthiti position.
- Relax in Makarāsana.

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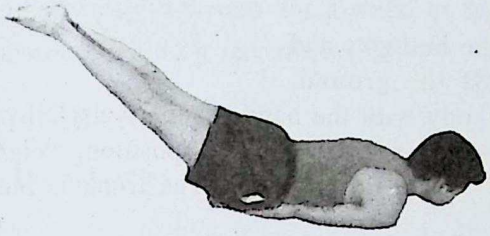
5. ŚALABHĀSANA

Sthiti: Prone Posture

Practice

- Make fists of your palms with the thumbs tucked in and place them under the thighs, with back of the hands towards the ground.



- While inhaling raise both the legs up as far as comfortable without bending the knees.
- Maintain this position for about one minute with normal breathing.
- Come back to Sthiti position while exhaling.
- Relax in Makarāsana.

Note

- *Pull up the knee caps and squeeze the buttocks to improve the posture.*

6. VIPARĪTA KARAṆI WITH WALL SUPPORT

Sthiti: Supine Posture

Practice

- Lie down on the back beside the wall, placing the body parallel to the wall.

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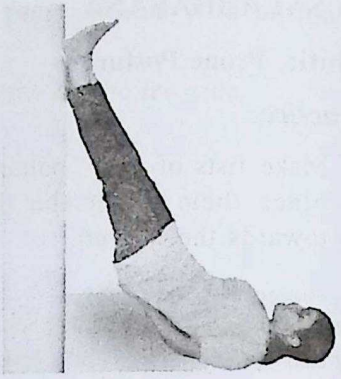

- Turn the trunk as you raise both legs to 90^0, and slide them on to the wall, keeping the knees straight.
- Rest for a few second with legs resting on the wall as you continue to lie down with the body perpendicular to the wall.
- Now raise the buttocks and the trunk off the ground, support the body with the hands at the waist allowing the legs to rest on the wall. In this final position, weight of the legs are completely on the wall. The trunk is inclined at about 45^0.
- Maintain this position with normal breathing.
- In this position, consciously try to relax the back.
- Then slowly lower the buttocks to the ground, rotate the legs back on to the floor, and relax.

Note:

- *In Viparīta Karaṇi position you can keep a pillow under the buttocks if necessary.*

7. VAKRĀSANA

Sthiti: Daṇḍāsana

Practice

- Bend the right leg at the knee and place it beside the left knee.
- Twist the waist towards the right as you exhale. Bring the left arm around the right knee and catch the right big toe.

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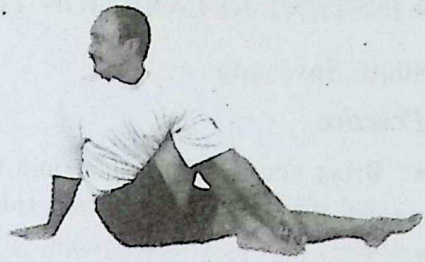
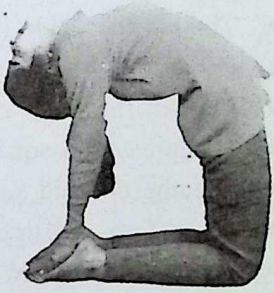


- Take the right arm back and keep the palm on the ground in such a way that the trunk is kept erect with a proper twist.
- After maintaining for about a minute with normal breathing return to sthiti and relax for a while in Śithila Daṇḍāsana.
- Repeat the same on the other side.

8. UṢTRĀSANA

Sthiti: Daṇḍāsana

Practice



- Sit in Vajrāsana.
- Stand on the knees.
- Place the palms on the waist with fingers pointing forwards.
- Inhale and bend the trunk backwards and place the palms on the heels.
- Maintain for about a minute with normal breathing.
- Exhale while coming back to Sthiti.
- Relax in Śithila Daṇḍāsana.

Note

- *The thighs should be perpendicular to the ground.*

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9 INSTANT RELAXATION TECHNIQUE (IRT)

Sthiti: Śavāsana

Practice

- Bring your legs together; join the heels and toes together and place the palms by the side of the thighs.
- Keep the face relaxed with a smile all through the practice.

- Start tightening from the toes.
- Tighten the ankle joints, and calf muscles.
- Pull up the kneecaps.
- Tighten the thigh muscles.
- Compress and squeeze the buttocks.
- Breathe out and suck the abdomen in.
- Make fists and tighten the arms.
- Inhale and expand the chest.
- Tighten the shoulders, neck muscles and compress the face.
- Tighten the whole body from toes to the head.
- Tighten; tighten; tighten.
- Release and let go the whole body instantaneously.
- Legs and arms go apart with the open palms facing the roof.
- Collapse the whole body.
- Enjoy the instant relaxation.

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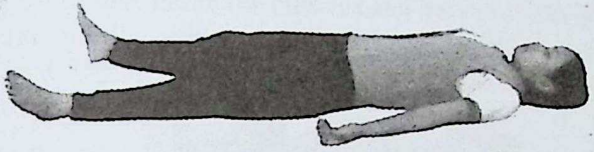
10. QUICK RELAXATION TECHNIQUE (QRT)

Sthiti: Śavāsana.

Practice

Phase I

- Feel the abdominal movements.Observe the movements of abdominal muscles going up and down as you breathe in and out normally. Observe 5 cycles.



Phase II

- Synchronize the abdominal movements with deep breathing.The abdomen bulges up with inhalation and sinks down with exhalation. Observe 5 cycles.

Phase III

- As you inhale deeply and slowly, energize the body and feel the lightness. As you exhale completely collapse all the muscles, release the tension and enjoy the relaxation. Observe 5 cycles.
- Chant 'AAA' in a low pitch while exhaling. Feel the vibrations in the lower parts of the body.
- Slowly come up from either the right or the left side of the body.

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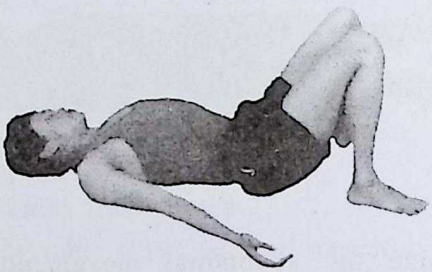
11. DEEP RELAXATION TECHNIQUE WITH FOLDED LEGS (D.R.T)

Sthiti: Śavāsana.

- Gently move your whole body, make yourself comfortable and relax completely.
- (D.R.T. can be practiced in Makarāsana.It can also be practiced being on back with legs folded at the knees and supported by the wall).



Practice

Phase-I

- Bring your awareness to the tip of the toes, gently move your toes and relax. Sensitize the soles of your feet, loosen the ankle joints; relax the calf muscles; gently pull up the knee caps, release and relax; relax your thigh muscles, buttock muscles, loosen the hip joints, relax the pelvic region and the waist region. Totally relax the lower part of the body. **R..e..l..a..x....** Chant 'AAA' and feel the vibrations in your lower parts of the body.

Phase-II

- Gently bring your awareness to the abdominal region and observe the abdominal movement for a while; relax your abdominal muscles and relax the chest muscles. Gently bring

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your awareness to your lower back; relax your lower back loosen all the vertebral joints one by one. Relax the muscles and nerves around the back bones. Relax the mid back, shoulder blades and upper back muscles, totally relax. Shift your awareness to the tip of the fingers, gently move them a little and sensitize. Relax your fingers one by one. Relax your palms, loosen the wrist joints, relax the forearms, loosen the elbow joints, relax the back of the arms (triceps), biceps and relax your shoulders. Shift your awareness to your neck, slowly turn your head to the right and left, again bring back to the center. Relax the muscles and nerves of the neck. Relax your middle part of the body, totally relax. **R..e..l..a..x...** Chant 'UUU' and feel the vibrations in the middle part of the body.

Phase-III

- Gently bring your awareness to your head region. Relax your chin, lower jaw and upper jaw; lower and upper gums, lower and upper teeth and relax your tongue. Relax your palates- hard and soft, relax your throat and vocal chords. Gently shift your awareness to your lips, relax your lower and upper lips. Shift your awareness to your nose, observe your nostrils, and feel the warm air touching the walls of the nostrils as you exhale and feel the cool air touching the walls of the nostrils as you inhale. Observe for a few seconds and relax your nostrils. Relax your cheek muscles, feel the heaviness of the cheeks and have a beautiful smile on your cheeks. Relax your eye ball muscles, feel the heaviness of eye balls, relax your eye lids, eye brows and in between the eye brows. Relax your forehead, temple muscles, ears, the sides of the head, back of the head and crown of the head. Relax your head region, totally relax. **R..e..l..a..x**''.and chant 'MMM' and feel the vibrations in your head region.

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Phase-IV

- Observe your whole body from toes to head and relax, chant an OM. Feel the resonance throughout the body.

Phase-V

- Slowly come out of the body consciousness and visualize your body lying on the ground completely collapsed.

Phase-VI

- Imagine the vast beautiful blue sky. The limitless blue sky. Expand your awareness as vast as the blue sky. Merge yourself into the blue sky. You are becoming the blue sky. You are the blue sky. Enjoy the infinite bliss. **E..N..J..O..Y** the blissful state of silence and all pervasive awareness.

Phase-VII

- Slowly come back to body consciousness. Inhale deeply. Chant an Om. Feel the resonance throughout the body - the soothing and massaging effect from toes to head.

Phase-VIII

- Gently move your whole body a little. Feel the lightness, alertness and movement of energy throughout the body. Slowly bring your legs together and the hands by the side of the body. Turn over to the left or the right side and come up when you are ready.

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E. PRĀṆĀYĀMA

1. VIBHĀGĪYA ŚVASANA (Sectional breathing)

This is a preparatory breathing practice for Prāṇāyāma. It corrects the wrong breathing pattern and increases the vital capacity of the lungs. It has three sections:

a. ABDOMINAL BREATHING (Diaphragmatic Adhama)

Sthiti: Vajrāsana

Practice

- Place the hands resting on the thighs in Cin Mudrā.
- Inhale, (pūraka) deeply, slowly and continuously, the abdomen bulges out.
- Before exhaling stop the breath for a few seconds effortlessly.
- Exhale, (recaka) draw the abdomen inwards continuously and slowly.
- Before the breath is reversed, stop the breath for a second.
- Repeat this breathing cycle five times.
- There should be no jerks in the whole process. It should be smooth, continuous and relaxing.

Note

- *In abdominal breathing the air fills the lower lobes of the lungs.*
- *Avoid movement of the chest.*

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b. THORACIC (Intercostal) BREATHING(Madhyama)

Sthiti: Vajrāsana

Practice

- Place the hands resting on the thighs in Cinmaya Mudrā.
- While inhaling, expand the chest cage forwards, outwards and upwards.
- While exhaling relax the chest wall and return to resting position.
- Repeat this breathing cycle five times.

Note

- *Avoid attention on movements of abdomen.*

c. UPPER LOBAR (Clavicular) BREATHING (Ādya)

Sthiti: Vajrāsana

Practice

- Sit in any meditative posture.
- Place the hands resting on thighs in Ādi Mudrā.
- While inhaling raise the collar bones and shoulders upwards and backwards.
- While exhaling drop down the shoulders to the resting position.
- Repeat this breathing cycle five times.

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Note

- *Try and avoid movements of the abdomen and chest .*

d. FULL YOGIC BREATHING

- Full yogic breathing is a combination of all the three sections of sectional breathing.

Sthiti: Vajrāsana

Practice

- Place the hands resting on the abdomen at the navel in Brahma Mudrā.
- During inhalation, the Adhama, Madhyama and Ādya prāṇāyāma occur sequentially.
- Now exhale in the same sequence (abdominal, chest and clavicular).
- Repeat this breathing cycle five times.

Note

- *The whole process should be relaxing and comfortable, without any tension in the face.*
- *Roughly gauge the time of your inhalation and exhalation. Take one third of your inhalation time for adhama ,one third for madhyama and one third for ādya. Follow the same sequence and timing for exhalation.*
- *This exercise can be performed. lying down in śavāsana or sitting in a cross-legged position with head, neck and spine erect.*
- *All breathings should be performed through the nose and not through the mouth.*

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- *As you increase the number of rounds of Full Yogic Breathing day after day, you will come to develop this practice as an automatic and normal function of the body.*

2. NĀDĪŚUDDHI PRĀṆĀYĀMA

Sthiti: Vajrāsana

Practice

- Sit in any meditative posture.
- Adopt Nāsika Mudrā.
- Close the right nostril with the right thumb and exhale completely through the left nostril. Then inhale deeply through the same (left) nostril.
- Close the left nostril with your ring and little fingers of Nāsikā Mudrā, release the right nostril. Now exhale slowly and completely through the right nostril.
- Inhale deeply through the same (right) nostril. Then close the right nostril and exhale through the left nostril. This is one round of Nādiśuddhi prāṇāyāma.
- Repeat nine rounds.

Note

- *This practice helps to maintain balance between Nādis.*
- *If you feel any headache, heaviness of the head, giddiness, uneasiness etc. it means you are exerting much pressure on the lungs.*
- *The first symptoms of correct practice is the feeling of freshness, energy and lightness of the body and mind.*

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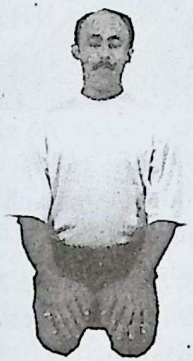
3. COOLING PRĀṆĀYAMA

a. ŚĪTĀLI PRĀṆĀYĀMA

Sthiti: Vajrāsana

Practice



- Place the palms resting on the thighs.
- Stretch the tongue forward out of the mouth and fold it so as to resemble the beak of a crow.
- Slowly suck the air through the beak and feel the jet of cool air passing down the trachea into the lungs.
- Enjoy the Kevala - Kumbhaka (automatic cessation of breath). turnover and
- Slowly exhale through the nostrils, carefully feeling the movement of warm air all the way up from the lungs through the trachea and the nasal passages.
- Enjoy the stoppage of breath and promote this blissful kevala-kumbhaka before the breath starts moving in again through the beak of the tongue.
- This completes one round of Ṣitali Prāṇāyāma. Repeat nine rounds.

B. SĪTKĀRI PRĀṆĀYĀMA

Sthiti: Vajrāsana

Practice

- Fold the tip of the tongue inwards and press the root of the upper palate with the tip of the tongue. The folded tongue

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slightly comes out between the two rows of teeth and provides a narrow opening on both the sides.

- Slowly suck the air in, which enters through the two sides of the tongue, diffuses throughout the mouth and moves down the trachea into the lungs.
- Promote kevala- kumbhaka and feel its effects.
- The warm air is exhaled out slowly through the trachea, and the nostrils and the breath stops automatically.
- The deep relaxation obtained due to cooling extends the kevala - kumbhaka.
- This completes one round of Śītkarī prāṇāyāma.
- Repeat nine rounds.

C. SADANTA PRĀṆĀYĀMA

Sthiti: Vajrāsana

Practice

- Let the upper teeth touch the lower teeth.
- Keep the tip of the tongue just behind the teeth and suck the air in through the crevices of the teeth and feel the cool stream of air as it moves over the gums slowly and continuously into the mouth and passes down the trachea into the lungs.

- The warm air is exhaled out slowly through the trachea, and the nostrils and the breath stops automatically.

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- The deep relaxation obtained due to cooling extends the kevala- kumbhaka(automatic cessation of breath).
- This completes one round of Sadanta.
- Repeat nine rounds.

4. BHRĀMARĪ PRĀṆĀYĀMA

Preparatary Practices of M-kāra and N-kāra:

- *In order to chant M-kāra, you can chant any word ending with 'M' such as 'Om', 'Mum', 'Swim', etc. but stretch the 'M' part only. This will result in 'M-kāra' chanting.*
- *Chant 'MM' a few times and observe that your lips are closed, rows of teeth are separated and the tongue is just behind the lower set of teeth.*

(N-kāra)

- *In order to chant N-kāra, you can chant any word ending with 'N' such as ' 'King', 'Ring', 'Sing' etc and strech the 'N' part only.This results in the 'N-kāra' chanting.*
- *Chant 'NN' a few times and note that your lips are separated during this chanting.*
- *While practicing Bhrāmarī, we need to use this sound of 'N-kāra' and not 'M-kāra' whereas while practicing nādānusandhāna we use the 'M-kāra'.*

Sthiti: Vajrāsana

Practice

- Assume Cinmudrā.
- Inhale deeply.
- Exhaling, produce a low pitched sound resembling the humming of a female bee.

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- Feel the vibrations in the entire head.
- This is one round.
- Repeat nine rounds.

Note

- *During the practice of Bhrāmarī use 'N-kāra' and not 'M-kāra'.*
- *Touch the tongue to upper (hard) palate.*
- *Initially the sound vibration is felt more at the throat region only.*
- *With long practices try to feel the strong vibrations in the entire head region along with its resonating effect through out the body.*

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F. MEDITATION

1. NĀDĀNUSANDHĀNA
(A-kāra , U-kāra, M-kāra, A-U-M)

a. A- KĀRA CHANTING

Sthiti: Vajrāsana

Practice

- Sit in any meditative posture and adopt Cinmudrā.
- Feel completely relaxed and close your eyes.
- Inhale slowly and completely.
- While exhaling chant 'AAA' in a low pitch.
- Feel the sound resonance in the abdomen and the lower parts of the body.
- Repeat nine times.

b. U- KĀRA CHANTING

Sthiti: Vajrāsana

Practice

- Sit in any meditative posture.
- Adopt Cinmaya Mudrā.
- Feel the sound resonance in the chest and the middle part of the body.
- Repeat nine times.

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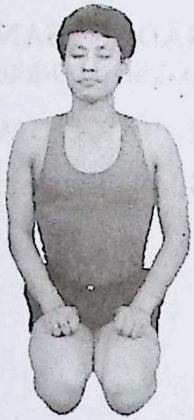
c. M-KĀRA CHANTING

Sthiti: Vajrāsana



Practice

- Sit in any meditative posture.
- Adopt Ādi Mudrā.
- Inhale slowly and completely.
- while exhaling chant 'MMM' in a low pitch.
- Feel the sound resonance in the entire head region.
- Repeat nine times.

d. A-U-M CHANTING

Sthiti: Vajrāsana

Practice

- Sit in any meditative posture.
- Adopt Brahma Mudrā.
- Inhale slowly and completely to fill the lungs.
- While exhaling chant 'A-U-M ' in a low pitch.
- Feel the sound resonance throughout the body.
- Repeat nine times.

Note

- *Different sounds like A, U, M & AUM are produced loudly so that they generate a fine resonance all over the body. Resonance will occur only when the frequency of the generated sound matches with the natural frequency of your body).*

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- *These resonant sounds act as stimulations and the post-resonance silence deepens the awareness and releases even very subtle tensions.*
- *Therefore, while producing different sounds (A, U, M, & AUM) try to adjust the pitch in such a way that a fine resonance is achieved.*

2. OM MEDITATION

Sthiti:

- Sit in any comfortable meditative posture feeling completely relaxed.

Phase-I

- Close your eyes and start chanting OM mentally. Allow the mind to repeat OM continuously without break. If there are distractions, you chant OM faster, not giving a chance for distractions. After a while the chanting slows down. Consciously slow it down further. If the mind jumps to distractions, again increase the speed of japa of OM kāra. Thus, by increasing and allowing the speed to slow down, you should be able to have an unbroken stream of the japa in your mind.

Phase-II

- Make the chanting softer and softer and gentler and gentler, and more and more effortless. As you progress on the path of meditation, you will reach the second phase of japa in which you start feeling the vibrations of the japa in some part of the body and later throughout the body.

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Phase-III

- As you slow down the japa of OM, observe the gap between two OMs. Further as you slow down, the gap goes on widening to diffuse into complete silence.

Phase-IV

- The deep experience of silence helps to expand from the three dimensional awareness of the body to all pervasive awareness. The bed of silence becomes deeper and more expansive - an ocean of silence with waves on it. Now merge into complete silence - AJAPA. This silence is the source of Creativity, Power, Knowledge and Bliss.

Phase-V

- From this deep ocean of silence in the heart region, let one OM emerge as an audible sound which diffuses into the entire body and the space all around. Enjoy the beautiful vibrations.
- Blink the eyes slowly, gently open the eyes and come out of meditation.

Note

- *Try to touch this state of deep rest and inner silence several times in the day whenever you have some free time.*

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G. KRIYĀS

NETI

1. JALA NETI (Cleaning the nasal passage)

Sthiti: Tāḍāsana

Practice

- Add about half a teaspoon of salt to a Neti pot full of sterile lukewarm water.
- Stand with the legs apart.
- Hold the Neti pot in your right hand.
- Insert the nozzle of the Neti pot into the right nostril.
- Keep the mouth open and breathe freely through the mouth.
- Tilt the head first slightly backwards, then forwards and sidewards to the left so that the water from the pot enters the right nostril and comes out through the left by gravity. Allow the flow till the pot is empty.

- Repeat the same on the left side.
- To clear the nasal passages of the remaining water, blow out the water by active exhalation through alternate nostrils as in Kapālabhāti.

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2. JYOTI TRĀTAKA

a. Preparations

i) *Get candles, candlestand and match box.*

ii) *Wash your eyes with cool and clean water (with eye cup if available) before starting the practice.*

iii) *When you practice in a group, sit around the candle stand, making a circle at sufficient distance (1.5 to 2 meters) from the candle stand . The maximum number of participants in a group around could be about ten. Keep the candle at the same level as the eyes.*

Sthiti: Any Meditative posture

Practice

- Sit in any comfortable meditative posture, if necessary you may sit in a chair.
- Remove your glasses and wristwatches.
- Keep your spine, neck and head in a line. Collapse your shoulders.
- Close the eyes and adopt Namaskāra mudra.
- Maintain a smile on your face through out the practice. Calm down your mind. Observe your body & breath.
- Begin the session by chanting the verse from the Upaniṣats praying for the welfare of the teacher and the student.

Step I: **Effortless Gazing or Focusing at flame**

- Gently open your eyes with a few blinks and look at the floor. Do not look at the flame directly.
- Slowly shift your vision to the base of the candle stand, then move to top of the stand, then to the candle and then slowly look at the flame of the candle. Now, start gazing at the whole flame without any effort. Do not blink your eyes. There may

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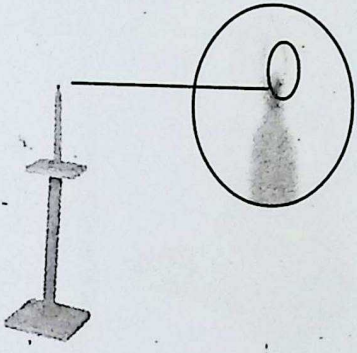
be a few irritating sensations, but use your will power and gaze in a relaxed way. If tears appear, allow it to flow freely. This is a sign of good practice. Let the tears wash out the impurities from the eyes. Learn to ignore the irritation and watering from the eyes.

- Gaze at the flame for about 30 seconds.



- Slowly close your eyes, rub your palms against each other for a few seconds, form a cup of your palms and cover your eyeballs.
- Give press and release palming.
- After completing five rounds, gently drop your hands down.
- Feel the cool sensation around the eyeballs. Relax for a few seconds. Do not open your eyes immediately.

Step II: **Intense focussing - Dhārana.**

- Gently open your eyes with a few blinks and look at the floor. Do not look at the flame directly.
- Slowly shift your vision to the base of the candle stand, then move to top of the stand, then to the candle and then slowly look at the flame of the candle. Now, start gazing at the whole flame without any effort.

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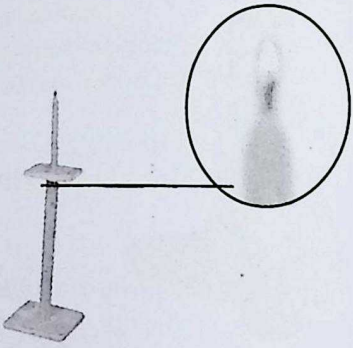
- Slowly gaze at the tip of the wick of candle, the small black cord. Focus your attention at one point. This is a practice of focussing and concentration. Keep on gazing. Use your will power. Let the tears come out and try not to blink your eyes. By practice the gaze becomes steady, making the mind one pointed.



- Gaze for about 30 seconds.
- Slowly close your eyes, rub your palms against each other for a few seconds then form a cup of your palms and cover your eyeballs.
- Give constant pressure palming. Press constantly around the eyeballs with your palms and inhale deeply and exhale completely as you maintain the pressure. Do not touch the eyeballs with your palms directly. Relax your eye muscles completely.
- Open the eyes again and focus on the wile of the candle. Proceed with alternate gazing (30 secs) and palming.
- After completing five rounds, gently drop your hands down.
- Feel the cool sensation around the eyeballs. Relax for a few seconds. Do not open your eyes immediately.

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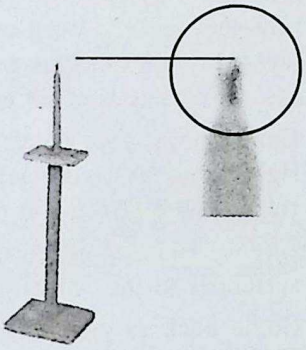
Step III: **De-focussing**

- Gently open your eyes with a few blinks and look at the floor. Do not look at the flame directly.
- Slowly shift your vision to the base of the candle stand then move to the top of the stand, then to the candle and then slowly look at the flame of the candle. First fix your attention at the flame, then gradually widen your vision. Slowly de-focus your attention from the flame and have a de-focused



gaze on the flame. With expansive awareness, collect all the details of the flame such as colour of the flame, shape of the flame, and aura around the flame. Then observe the aura expanding more and more and see the small light particles around the flame. Recognize the subtle changes acheived by de-focussing.

- After one minute of de-focussing, gaze or focus on the flame. Slowly close your eyes and retain the image in your mind. Visualize the flame between your eyebrows and collect all the details with your eyes closed. When the image disappears go for palming.
- This time we combine palming with breathing and Bhramari. First apply constant pressure around your eyes, then inhale

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and chant Bhramari Mm....; feel the vibrations of Bhramari through out the body; repeat the same. Inhale - chant Mm.... as you exhale, inhale Mm...., inhale Mm.... and the last round inhale Mm....; feel the sound resonance in the entire head region specially around the eyes.

Step IV: **Silence**

- Feel the silence and relax for a while. After sufficient relaxation, gently drop your hands down. Sit quiet for some time and feel the deep comforting effect of the practice. Be aware of the changes taking place inside. Recognise that the mind has become completely calm.
- Gently bring your hands behind the back, catch hold of the right wrist with your left palm, make a loose fist with the right hand and feel the pulse of the right hand.
- As you exhale, gently bend down towards the floor and surrender to the All Mighty.
- Come back as you inhale.
- Gently give a feather massage around the eye muscles with three fingers (index, middle and ring fingers).

Note:

- *This is to be practiced in the dark preferably in the evening.*
- *Remove glasses, wristwatches, and belts and make yourself comfortable in the posture.*
- *Sit with your head, neck and spine upright. Always open the eyes with a few blinks.*
- *During palming don't let the palms touch or press the eyeballs. (Palms & not the fingers cover the eyes).*
- *During palming do very slow & deep breathing with awareness.*
- *Palms are placed in such a way that there is complete darkness to the eyes.*

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3. CLEANSING BREATH (KAPĀLABHĀTI KRIYA)

Sthiti: Daṇḍāsana

- Move into any meditative posture.

PRACTICE

- Exhale with a blast. continue breathing with active and forceful exhalation and passive inhalation.
- During each exhalation, blast out the air by vigorous flapping movements of the abdomen in quick succession.
- Allow the air to flow in passively by relaxing the abdominal muscles at the end of each exhalation.
- Repeat at the rate of 20 strokes per minute.
- Continue for 2-3 minutes.
- Now observe an automatic suspension of breath. In fact, there will be no urge for breathing for a few seconds.
- Simultaneously the mind may experience a deep state of silence. Enjoy this state of deep rest and freshness.
- Wait until the breathing comes back to normal .

Note

- *Throughout the entire practice the spine must be kept erect without any movement of the trunk, neck or the face.*
- *It is important to learn to allow the inhalation to happen automatically by relaxing the abdominal muscles at the end of each quick exhalation.*

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- *Kapalabhati can be practiced through alternate nostrils by alternately closing the right and left nostrils in Nāsika mudrā.*
- *Normally Kapalabhati is practiced at the rate of 60 strokes per minute. For persons with back or neck pain we practice only at a rate of 10 to 20 strokes per minute and repeat it 2 to 3 rounds with normal breathing intervals of a few seconds. With regular daily practice and when the back pain disappears you can increase the speed to 60-120 strokes per minute.*

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III

IAYT FOR BACK PAIN

A. ANNAMAYA KOŚA PRACTICES

We have seen how the functional type of back pain (non-specific back pain) is related to the mind, and considered as one of the Ādhija Vyādhis. If we discover and correct the problem at this stage even before it percolated into the Prāṇa and Anna body then we may not have required any of these special yoga physical practices. Direct handling of the mind through Dhāraṇa, Dhyāna, Śravaṇa, Manana, Nidhidhyāsana would have corrected the problem. But now as you have a physical problem which is the after effect of the stress at the mind level manifesting as persistent pain, chiefly due to muscle spasm primary or secondary, you need to bring your awareness to the part of the pain at the physical level, work with body movements without harming the underlying vital structures such as the nerves or the spinal cord or blood vessels. You are correcting the problem slowly by the process of pratiprasava(retracing the steps). Understanding why you are doing a practice and how it works is the most important factor in getting the best results.The three important factors that we need to correct in the back are

1. Relax the spinal muscles.
2. Strengthen the spinal muscles.
3. Mobilise the stiff back.

What are the Yoga practices that a person with Back pain should avoid ?

1) Avoid all those postures and movements (however simple they are) that hurt you in the first few sessions of yoga practices until you have developed confidence and learnt the trick of relaxation.

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2) Avoid all acute forward and backward movements of the spine.

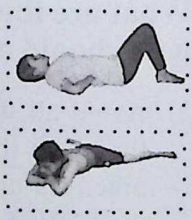
3) Avoid jerky brisk movements of spine.

The set of practices described in this book have been carefully selected in such a way that none of the practices involve acute bends or jerks. Amongst the safe and useful practices described here, you may find that some of them hurt you gently and some give a good feeling of ease, relaxation and freedom from pain, which may vary from person to person depending on the differences in the nature of your problem. Make a note of one or two practices from the series that gives you very good relief and one or two practices that gives you a mild aggravation of pain. Once you discover these, you will be able to proceed more confidently. Apart from going through the whole set of practices for one hour daily in the morning, you can help yourself to completely recover from the problem by repeating the two practices you discovered alternately.Carefully come to the posture that slightly increases the pain and then move into the position that relieves the pain. Repeat them about 5 to 10 times several times in the day whenever you find time (at least three times per day) preferably on empty stomach and also whenever you get the pain. This will train you in the self management of your back pain through deeper and deeper internal awareness.

How does Yogasanas work in Back Pain?

1. Practices to relax the spinal muscles

a) IRT, QRT and DRT: These relaxation techniques performed in supine posture (Śavāsana) with the knees bent is a very useful practice. If you find it very painful to practice DRT in Śavāsana posture you may relax in makarāsana.



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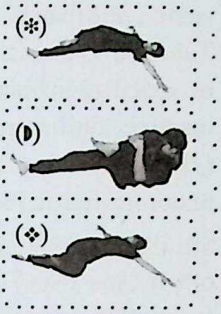
b) In addition to DRT in supine position there is a very special yogic principle that is used to go into deeper and deeper rest to the back. We use Folded leg lumbar stretch*, Pavana muktāsana lumber stretch• and Crossed leg lumbar stretch• practices for acheiving deeper relaxation of the spinal muscles.



How can a muscle stretch and movement give greater relaxation?

The principle involved is the concept of cyclic meditation culled out from Māndūkya Kārikā (the commentary on Mandūkya upaṇisād) by Goudapāda. The verse is -

लये संबोधयेत् चित्तं विक्षिप्तं शमयेत् पुनः
सकषायं विजानीयात् समप्राप्तं न चालयेत् ।

Laye sambodhayet cittam vikṣiptam śamayet punaḥ
Sakaṣāyam vijānīyāt samaprāptam na cālayet.

(Māṇḍūkya Kārīkā 3 - 44)

Awaken the mind when it is dull and lazy. Calm down the mind when disturbed. Recognize the deep seated blocks due to suppressed stresses; do not disturb the mind once it has reached the state of balance.

Sage Goudapāda says that there are two blocks for the progress of man namely,

1) Laya - Dullness, laziness, drowsiness, or
2) Vikṣepa - Distractibility, hyperactive mind or uncontrolled surges of emotions.

We have to understand that these two are the two faces of the

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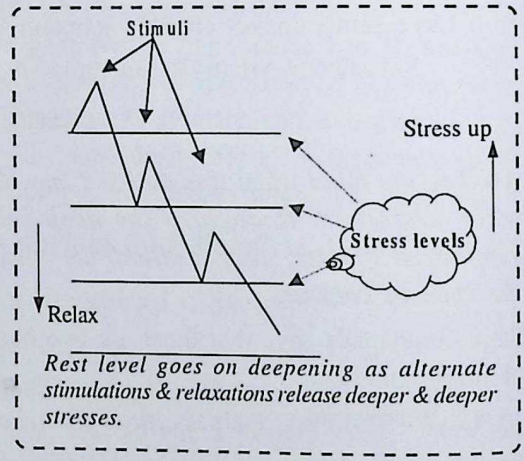
same coin that is, the *uncontrolled excessive speed of the mind.* Take the example of energy and the matter; when the high level of speed is all packed up in atoms it appears like an immobile, inactive, dull solid matter; when the same quantum of energy is released it may manifest as an atomic explosion - again an uncontrolled manifest speed that could be highly destructive.

Similarly the mind in the state of Laya is not inert but is in a state of extreme speed which is packed up and when manifest it shows up as Vikṣepa which is a violent aggressive state of the mind that is agitated, restless, and distractible. What we understood in the concept of Ādhija Vyādhi is that the stress which started in the manomaya kośa as speed (Laya or vikṣepa) percolates through prāṇamaya kośa into annamaya kośa as back pain. At the prāṇamaya kośa the speed is translated as blocked or packed up energy that prevents free flow of energy through the prāṇa channels (Nādis). These blocks manifest as pain or inflammation. At the physical level this speed is manifesting as too many nerve fibres triggering off electrical activities that makes too many muscle bundles in the spinal muscles contract. Muscle spasm triggers pain which is again speed seen as too many nerve fibres sending out warning signals to the brain. Hence Laya - the packed up form of excessive speed at the physical level is stiffness and Vikṣepa - the manifest speed is the pain.



Rest level goes on deepening as alternate stimulations & relaxations release deeper & deeper stresses.

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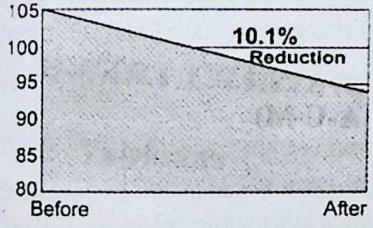
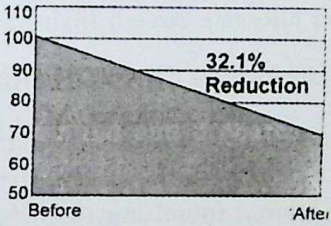
To come out of Laya give a stimulation in the form of a stretch during a movement and once the stretch is at its peak (the state of Vikṣepa) maintain with ease and a calm mind. Now slowly return to resting position and let-go so that you can sink into deep relaxation. This process of alternate stretch followed by a relaxation has to be carried out on the back ground of deep internal awareness. As one goes on repeating this process of alternate stimulation(Sambodhayet) and relaxation(Śamayet) with deep internal awareness, deep seated stresses get erased and a very deep level of rest can be achieved.

Using this concept of cyclic relaxation you can go to a very deep level of relaxation within about 20 minutes; the degree of relaxation will be 3 to 4 times deeper than in DRT, the simple relaxation in supine posture.

DRT



Cyclic Meditation



Oxygen consumption is used as a measure of the degree of rest or relaxation. When the body-mind complex is relaxed the amount of O_2 used up is much less and this can be measured by measuring the oxygen you consume. You are asked to a breath through a mask which is connected to the equipment that can calibrate the O_2 in air that is breathed in and out. We noticed that the O_2 consumption fell by 10% after DRT and by 32% after cyclic meditation showing that the cyclic relaxation can give very deep relaxation.

Now apply this principle as you practice the three practices

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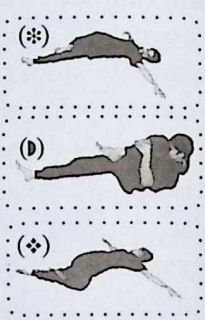
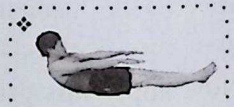
included in our low back pain special techniques. These are Folded leg lumbar stretch*, Pavana muktāsana lumbar stretch', Crossed leg lumbar stretch*, concentrate on the points of pain, close your eyes and observe with the inner eye the painful zone without any fear, anxiety or boredom. Feel the stimulation when you stretch slowly and gently. Observe the let-go phenomenon at the point of stimulation, when you return to resting position following every stretch. Thus, go on improving your deep interval awareness of the deeper and deeper relaxation that follows every stretch (stimulation). Whenever our patients with back pain leave our arogyadhama (residential health home at Prashanthi Kutiram), I ask them which is the practice they like the most. Majority of them invariably say that they enjoy repeating the crossed leg lumber stretch as it gives alternate stretch (pain) and relaxation (no pain).



2 Strengthening the Spinal Muscles.

a) Seṭubandhāsana lumbar stretch* This is tobe repeated several times to build up the strength of the supporting postural lumbar spinal muscles. You may start with five repetitions (depending on the degree of pain) three to four times per day. As your pain reduces increase the repetition to 20 to 30 in each session.

b) Dorsal stretch* and Straight leg raise breathing' - alternate legs: These two practices help in building up the front support (abdominal) for the back. This is specially useful for women who get back pain during and after pregnancy, or due to obesity or due to lax abdominal wall, or hernia. Just like the Seṭubandhāsana lumbar stretch for



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strengthening the back muscles it is important to repeat these two abdominal muscle building practices with progressively increasing number of repetitions.

3. To reduce stiffness of the Spine.

All other physical practices included in this series are meant to overcome the stiffness and increase the flexibility of the spine. All the yogāsanās in this back pain special technique are safe and have tobe maintained with deep internal awareness and relaxation.The tuning of the mind to expansion while maintaining is essential to get the maximum benefit. When you maintain with relaxation in the final posture of the āsana, the deeper corrections take place. The scar tissues get gradually released, the prāṇa blocks are diffused giving you a great sense of freedom from the stiff back.

B. PRĀṆĀMAYA KOŚA PRACTICES FOR BACK PAIN

Correction at the level of Prāṇa imbalance is the most important component of yoga therapy. The first step is to recognize the Prāṇa imbalances that are manifesting as irregularities of breathing in its speed, rhythm and continuity. The breathing practices include,

(a) Cleansing breath: These are characterised by fast breathing. They are called so because they remove CO_2 from the body and cleanse the system. These also train you to become aware of different phases of breathing.

(b) Breathing exercises: All these correct the rhythm of breathing by synchronizing body movements with inhalation and exhalation.

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(c) Prāṇāyamas: The principles involved in these practices are

(i) Slow down the breathing rate: The normal rate of breathing is usually around 12 to 16 breaths per minute. As you go on, your breathing rate can come down to almost 2 to 3 per minute.

(ii) Exhalation longer than inhalation: All prāṇāyāmas prescribe this requirement. A prolonged easy slow exhalation is the safest way to get the mastery over the breathing cycles. Once you have learnt these , your mastery over the use of breathing to calm down the mind would be achieved.

When you practice the prāṇāyāmas for back pain, you may take the precaution not to allow the back pain to get worse by sitting erect for too long a time. You may practice them sittingin a chair with the back supported. You may also practice most of them in the supine (Śavāsana) posture with the legs folded up.

As your practices become deeper your understanding of how the prāṇa becomes balanced and gentle should become your personal experience.

C. MANOMAYA KOŚA

All functional back pains (stress related causes) have its origin in the mind. Even in the so called mechanical back pains that are due to wrong postures (both during rest and occupation) the mind has an important role to play. Hence the practices at the manomaya kośa are relevant to correct the problem in a holistic way. The practices of Dhārana, Dhyāna and Devotional sessions are very valuable tools to directly handle the emotional states of the mind. Om meditation as described in this book expands your awareness and helps you recognize the speed and distractability

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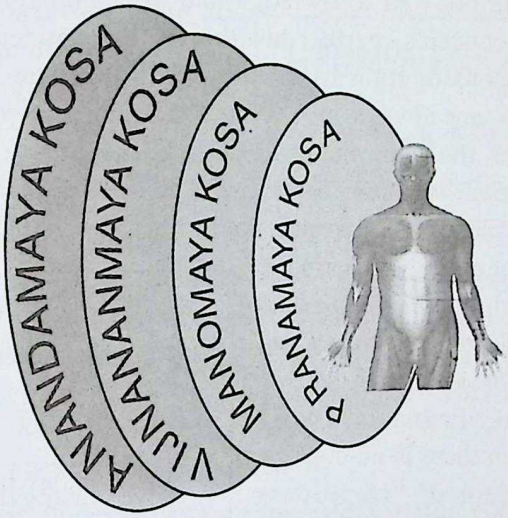
of the mind so that you can consciously become a master of the process of slowing it down.



Devotional session is the tool for emotion culturing. All our problems of stress are traceable to uncontrolled surges of emotions such as anger, fear, worry, depression etc.We have seen how all these emotional upsurges are nothing but excessive uncontrolled speed of the loop of thoughts in which you get entangled.

The art of emotion culture uses the concept of Bhakti or devotion to replace the speeded up distressful emotions by the soft emotions of pure love. Understanding the concept that the expression of the divine and pure love is to find joy in the joy of others and you find more joy in giving instead of expecting from the family and society around. Applying this concept to the relationship problems in your life that may be at the root of your stress may reverse your entire life style. You will move on to a life of joyfully accepting and respectfully appreciating your fellow human beings around.

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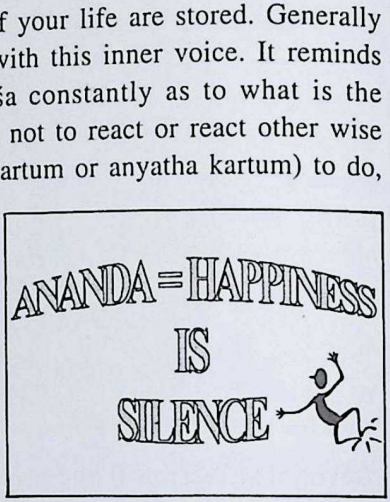
D. VIJNĀNĀMAYA KOŚA PRACTICE

This is the body of knowledge and discrimination, library of idealistic concepts, perfect health and the conscience in which all the lessons of right living of your life are stored. Generally most of us are always in war with this inner voice. It reminds and guides the manomaya kośa constantly as to what is the right reaction; whether to react, not to react or react other wise (कर्तु अकर्तु अन्यथाकर्तु - kartum, akartum or anyatha kartum) to do, not to do or do it the other way.



If the manomaya kośa is so highly cultured (mastery) and there is absolutely no conflict with what vijnānamaya kośa guides then there is no disease. The concept of "Happiness analysis" is the trick that helps up at this level. It states that, in all types of happiness, due to eating a good food, hearing good music, speaking to good friends, seeing a flower, cuddling a baby, achieving the life long ambitions, fulfilling your duties,earning a lot of money, being appreciated, or sitting in meditation,your mind has touched a state of complete silence.This allows your deeper and subtler bodies, the ānanda and vijnāna to unfold itself. In yogic counselling, you may start analysing your own life or take the help of a yoga counsellor (a senior yoga teacher). Recognize how, why, and when you got struck within the loop of your own inner urges and reactions that may have caused the stresses. Most often it may be a unresolvable relationship problem where the problem appears tobe from outside like a difficult mother in law, husband or wife, difficult child or a boss. Other wise it may be your own hypersensitive mind that worries unnecessarily about small

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things, builds up the problems to a big heap of a mountain and you end up with sleepless nights. The other common problem could be frustrations due to unfulfilled ambitions of life. After this stage of analysing yourself, what you need to realise is that all your suffering is self created. Even in the most disturbing situations you still have the freedom to detach yourself and rest in the inner silence. The happiness you were seeking for, through your family, job or friend or money is nothing but an inner state of complete silence. This being the case you just have to reach that state independent of all these expectations and happenings in your life.

TAITTIRIYA PROCLAIMS

"You touch the bed of Silence during all joyful moments"

A school teacher in her fifties (a little over weight) saw me with persistent low back pain which had troubled her for about five years and had got really bad since six months making her go off work very frequently. She was brought to our inpatient residential health home praśānti kutīram and started practicing yoga - back pain special techniques, prāṇāyama, cyclic meditation etc., of IAYT. By about two weeks when she was to leave the campus, she was completely free from the pain. During her follow up visit after three months she appeared very calm and cheerful. When I asked her, how she could look so smart and happy, she revealed her story which she had not talked about earlier in spite of the tender loving approach of our counsellors during her stay. She said, 'madam, I am a widow; I lost my husband 15 years ago; I had to bring up two of my sons with much financial difficulty as

Yogic Counselling

Unfulfilled desires
Frustrations
Coping with difficult life events
Relationship problems
Hypersensitive mind

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my earnings as a school teacher was really insufficient. The older of my two sons is very good and has settled down in his life. But the second fellow has fallen into bad company. He is not studying well. In fact he failed this year in his 12th standard. With all these problems, i was going into a state of depression. After being in praśānti i realised that these practices will relax my back and I need not be crippled all my life. More important than this was the analysis of happiness and contentment gave me a major shift in my understanding of my own life. I am continuously resting in my inner state of peace.

The situation with finances or the boys have not changed. I have changed. I now know that my contentment is my own making and I have experienced it within me in my meditations. Now I can talk to my son with greater ease and not with a crying heart of a worrying mother. I am now not only free from my back pain but i am thankful to my back as it has opened up a big arena of my inner world of peace and bliss. I know that I have a long journey to achieve the state of total freedom from all my problems. But I think I am in the right track. I am now confident. I am surprised that my back that had troubled me for 15 years feels so free and supple within three months.'

This is how a conceptual correction at the vijnānamaya kośa uproots the basic problem of the Annamaya kośa.

E. ĀNANDAMAYA KOŚA

The science of Yoga and Vedanta says that the fundamental stuff of this universe with which we are all made of is "Bliss"; this state of bliss is your basic fabric; to realise and live in this blissful state under all circumstances is the goal of life. The present day life style is full of stresses induced by target oriented jobs,and racing with time to catch up with demands of the competitive life style. To maintain the necessary equipoise and awareness that " I am made of the stuff called Ānanda(bliss)" is

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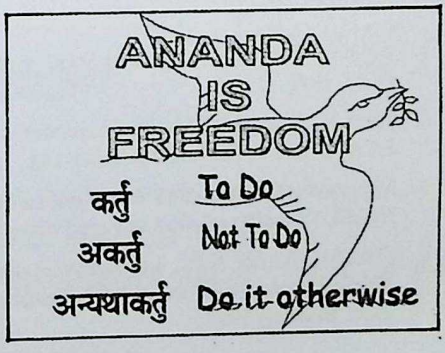
just not possible. Concepts of karmayoga are therefore very valuable for the modern man. The four major rules of karma yoga are

नियतं संगरहितं अरागद्वेषतः कृतं अफलप्रेप्सुना कर्म - - - -

Niyatam, sangarahitam, arāgadveṣatah krtam, aphalaprepsunā karma - - - -

i. Perform the actions with a sense of duty(niyatam),(ii) work in an unattached fashion without losing efficiency,(iii) not motivated by very strong likes and dislikes and (iv) not disturbed by the anxiety about results of your action.

The key to Karmayoga is "Action in relaxation"; this is a trick that you have to learn with a clear understanding of these concepts portrayed in Bhagavad gīta. This is the secrete of being joyful, contented and unperturbed while working. Socrates , the great philosopher had a very demanding wife. She used to be irritated if he did not give her enough attention as he used tobe immersed in his thoughts and teachings. She would first get angry, then shout and finally when Socrates did not respond she would bring a bucket of water and slash it on his head. Socrates would smile and say 'oh, it has to rain after a thunder bolt'.This may appear like a careless selfish husband's ways. But life was as easy for him even at the time of death. As we know he was punished for saying things which were not in agreement with the faiths of the rulers the state. He was to drink a cup of poison which he agreed with a smile. The day of the execution came. Socrates has been given the poison, he has



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drunk the poison and continues to give his last lessons to the disciples with the same degree of ease and clarity; in between as he feels the numbness spreading up from the toes he is saying "oh now my legs are dead, now my abdomen is dead' and continues with his teachings. There is no change in his mental state and he is as easy as ever. The disciples are getting agitated, they are in no mood to listen to his philosophy any more; they are terribly disturbed and one of them cries out and says'oh, Socrates, you are dying, the end is coming, why are you not disturbed?" He smiles with ease and says **"I must die, must I cry too?"**. What a degree of freedom, detachment, non-identification with pain, suffering and death! This is the secrete of a karma yogi; not at all disturbed by the pains and suffering of the body; a deep conviction in ones true nature tobe 'Ānanda'; not at all affected by situations and events that go on around the body mind complex;this is the state of Anandamaya kośa. The method to achieve this is Karma yoga.

Thus we see that it is very important to adapt and assimilate the entire concept of the integrated approach of yoga therapy and work at all the five aspects of your personality to get rid of the problem of your long standing persistant problem of back pain. Let us now proceed to learn the practices systematically.

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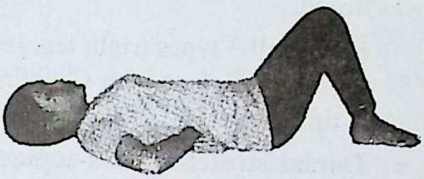
Set A

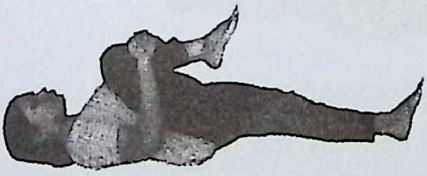
Eight step Yogic relaxation for Acute Low Back Pain

1. **Press the spine to bed :** Lie down flat in your bed and bend the knees up. Place a hand towel folded four times under the painful part of the spine.Tuck in both your hands under the spine with the palms resting on the towel.



Press the spine to the bed for a few seconds and release. relax. Repeat five times.

2. **Press and release with breathing**: Breath out to press and breath in to release. Repeat five times.
3. **Press and release with chanting:**While breathing out chant "AAA" and press the spine; breath in and release; feel the vibrations of "AAA" starting from naval and sending internal vibratory massage to the painful part. Repeat five times.
4. **Pavanamuktāsana lumbar stretch**: Slowly raise the right leg up with the knee bent; using the interlocked fingers of both hands press the thighs fully on the abdomen. Do not raise the head. Come back to sthiti.



Repeat five times; repeat the same way on the left side.

Repeat the same with both legs (5 times).

Repeat the same with breathing (5 times); exhale as you

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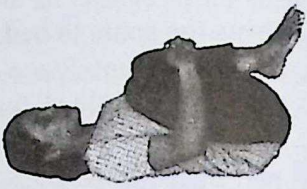
press the thigh on abdomen and inhale as you come down to sthiti

5. **Pavanamuktāsana lumbar stretch with chanting:** Chant "AAA" as you exhale and press the thigh on the abdomen. Inhale and come down.



Repeat all 3 types (right leg, left leg and both legs with Chanting 5 times each).

6. **Dorsal stretch:** (Sthiti-supine posture)

While exhaling raise the upper half of the trunk and bring the arms up to shoulder level. Inhale and come down. Repeat five times.

7. **Dorsal stretch with chanting and feeling:** Repeat step 6 with chanting "AAA" while you exhale and now come down to relax.

8. **Quick Relaxation Technique:** Come to Śavāsana posture and relax the whole body by the technique of QRT for 3 minutes.

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Set - B
Integrated Yoga Module for
Chronic Low Back Pain
One hour Daily

Steps	Pg.No.	Practice	Rounds	Duration
1 ➢		**Specific practices**		
	46	Folded leg lumbar stretch	5x2	2 min
	47	Crossed leg lumbar stretch	5x2	2 min
	48	Pavanamuktāsana lumbar stretch	5x2	2 min
	49	Seṭubandhāsana lumbar stretch	5	2 min
	43	Hand stretch breathing	3x3	2 min
2 ➢	85	**Quick Relaxation Technique**		4 min
3 ➢		**Breathing practice**		
	52	Tiger breathing	5	1 min
	55	Bhujangāsana breathing	5	2 min
	56	Ardha Śalabhāsana breathing	5x2	1 min
	60	Side leg raising	5x2	1 min
4 ➢	61	**Relaxation in Makarāsana**		3 min
5 ➢		**Yogāsanas**		
	77	Ardhakati Cakrāsana	1+1	2 min
	78	Ardha Cakrāsana		1 min
	79	Parivṛitta Trikoṇāsana	1+1	2 min
	82	Vakrāsana	1+1	2 min

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6 ➢	86	**Deep Relaxation Technique (with folded legs)**		7min
7 ➢		**Prāṇāyāma**		
	89	Vibhāgīya Śvasana (sectinal breathing)	9x4	5 min
	92	Nādi Śuddhi	9	5 min
	93	Sītkāri/ Śītalī / Sadanta	5	2 min
	95	Bhrāmarī	5	2 min
8 ➢		**Meditation (Dhārāṇa, Dhyāna)**		
	97	Nādānusandhāna	9x4	5 min
	99	Om Meditation		5 min

Note

- ***Jala Neti kriya*** *to be practised once a week in the morning before starting the eight steps of IYM for back pain.*
- ***Jyoti Trataka****(20 min) to be prictised daily in the evening before dinner sitting in a chair.*

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Integrated Yoga Module for CHRONIC LOW BACK PAIN

One hour Daily

Steps	Pg.No.	Practice	Rounds	Duration
1 ➢		**Specific practices**		
	46	Folded leg lumbar stretch	5x2	2 min
	47	Crossed leg lumbar stretch	5x2	2 min
	48	Pavanamuktāsana lumbar stretch	5x2	2 min
	49	Seṭubandhāsana lumbar stretch	5	2 min
	51	Dorsal stretch	5	1 min
	45	Hands in and out breathing	5	1 min
2 ➢		**Quick Relaxation Technique**		4 min
3 ➢		**Breathing practice**		
	53	Rabbit breathing	20	1 min
	54	Śaśaṅkāsana breathing	5	2 min
	57	Straight leg raise breathing (alternate legs)	5x2	2 min
	59	Side lumbar stretch	5x2	2 min
4 ➢	61	**Relaxation in Makarāsana**		3 min
5 ➢		**Yogāsanas**		
	79	Bhujangāsana		1 min
	80	Śalabhāsana		1 min
	81	Viparītakaraṇi with wall support		2 min
	83	Uṣtrāsana		1 min

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6 ➢	86	**Deep Relaxation Technique (with folded legs)**		7 min
7 ➢		**Prāṇāyāma**		
	89	Vibhāgīya Śvasana (sectinal breathing)	9x4	5 min
	92	Nādi Śuddhi	9	5 min
	93	Sītkāri/ Śītalī / Sadanta	5	2 min
	95	Bhrāmarī	5	2 min
8 ➢		**Meditation (Dhārāṇa, Dhyāna)**		
	97	Nādānusandhāna	9x4	5 min
	99	Om Meditation		5 min

Note

- ***Jala Neti kriya*** *to be practised once a week in the morning before starting the eight steps of IYM for back pain.*
- ***Jyoti Trataka****(20 min) to be prictised daily in the evening before dinner sitting in a chair.*

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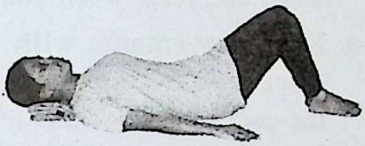
Set D

Eight step yogic relaxation for ACUTE NECK PAIN

Lie down flat on your back on the ground with a soft carpet spread on it and use a folded bath towel as a pillow.(the pillow should not be too soft or too thick).

1. **Press and release**



Sthiti- as in Śāvasana;Here you may keep the knees bent. Close your eyes; gently press the back of the head, neck and shoulder to the ground; hold on for a few seconds to concentrate on the pain. Release the pressure; repeat five times.

2. **Hands in and out breathing**: Spread the arms along the ground to a straight line at the level of shoulders. Exhale and raise the arms up with palms touching each other. Repeat 5 times, relax in Śavasana.

3. **Press and release with breathing**: Repeat step one with breathing, inhale and press, exhale and release; concentrate on the increase of pain when you press and the feeling of freedom from pain when you release. Repeat five times.
4. **Side movements of neck**: Gently roll the neck over to the left; feel the stretch. Come back to the centre and relax. Now

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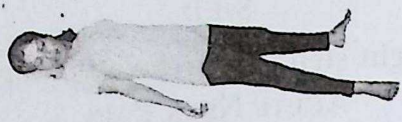
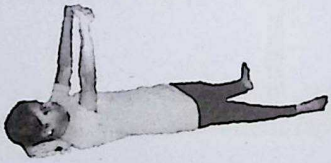


roll the neck to the right upto the point of pleasurable pain and come back to the centre. Repeat five times at a comfortable speed.

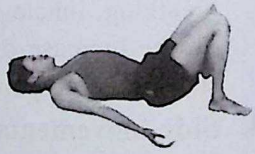
5. **Neck movements with breathing:** Repeat the same five times with deep breathing; exhale while rolling to the side, inhale and relax when you come back to the centre.

6. **Neck movements with chanting:** Repeat the same neck movements five times with chanting "MMM" while moving the neck to the side and relax when you come back. Feel the internal massaging effect of "MMM" chanting in the painful parts of the neck and shoulder.

7 **Hands stretch breathing in śavāsana:** Bring both palms on to the front of the chest; interlock the fingers of both hands and rest them on the breast bone.Now inhaling, stretch and rotate the arms upwards so that the palms face the roof. Exhale and slowly drop down the arms to rest the hands on the chest.



8. **QRT with folded knees:** Relax the whole body in Śavāsana position but keep the knees folded up(to prevent any extra pain in th neck). if there is no pain it is better to do it without folding the knees. Follow all the steps of QRT (Pg. 85)



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Set - E

Integrated Yoga Module for CHRONIC NECK PAIN

One hour Daily

Steps	Pg.No.	Practice	Rounds	Duration
1 ➢		**Śithīlikaraṇa Vyāyāma (loosening exercises)**		
	61	Loosening of Fingers	10	½ min
	62	Loosening of Wrists	10	½ min
	64	Loosening of Elbows	10	½ min
2 ➢	65	Shoulder rotation	10x2	1 min
3 ➢	80	**Instant Reslaxation Technique**		2 min
		Breathing practices		
	43	Hand stretch breathing	5x3	2 ½ min
	45	Hands in and out breathing	5	1 min
	68	Neck bending	10x3	4 min
	52	Tiger breathing	5	1 min
	53	Rabbit breathing (with relaxation)	20	1 min
	54	Śaśāṅkāsana breathing	5	1 min
	55	Bhujangāsana breathing	5	1 min
	55	Ardha Śalabhāsana breathing	5x2	2 min
	51	Dorsal stretch	5	1 min
	57	Straight leg raise breathing (alternate legs)	5x2	2 min
	49	Seṭubandhāsana lumbar stretch	5	1 min
	48	Pavanamuktāsana lumbar stretch	5x2	2 min

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4 ➢	81	**Quick Relaxation Technique**		3 min
5 ➢		**Yogāsanas**		
	74	Ardhakati Cakrāsana	1+1	2 min
	75	Ardha Cakrāsana		½ min
	75	Parivritta Trikoṇāsana	1+1	2 min
	76	Bhujangāsana		½ min
	77	Śalabhāsana		½ min
	78	Vakrāsana	1+1	2 min
	79	Uṣtrāsana		½ min
6 ➢	82	**Deep Relaxation Technique**		7 min
7 ➢		**Prāṇāyāma and Kriyas**		
	103	Kapālabhati		1 min
	85	Vibhāgīya Śvasana (sectional Breathing)	5x4	3 min
	88	Nādi Śuddhi	5	3 min
	89	Sītkāri/ Śītalī / Sadanta	5	2 min
	91	Bhrāmarī	5	1 min
8 ➢		**Meditation (Dhārāna, Dhyāna)**		
	93	Nādānusandhāna	5x4	3 min
	95	OM Meditation		5 min

Note

- Jala Neti kriya to be practice once a week in the morning before starting the eight steps of IYM for neck pain.
- Jyoti trataka (20min) to be practiced everyday in evening before dinner.

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Set - F
Integrated Yoga Module for
Chronic Knee Pain
One hour Daily

Steps	Pg.No.	Practice	Rounds	Duration
1 ➢		**Śithīlikaraṇa Vyāyāma (loosening exercises)**		
	69	Knee cap Tightening	10	½ min
	69	Sitting Position Loosening	10	½ min
	46	Folded Leg Lumbar stretch	10x2	1 min
	71	Cycling		½ min
	70	Patella Movement		½ min
	73	Knee Rotation		½ min
2 ➢	80	**Instant Reslaxation Technique**		2 min
3 ➢		**Breathing practices**		
	57	Straight leg raise breathing (Sitting in chair)	5x2	2 min
	48	Pavanamuktāsana lumbar stretch	5x3	2½ min
	49	Seṭubandhāsana	10x3	4 min
	69	Knee Cap Tightening	5	1 min
	55	Ardha śalābhāsana breathing	20	1 min
4 ➢	81	**Quick Relaxation Technique**		3 min
5 ➢		**Yogāsanas**		
	74	Ardhakati Cakrāsana	1+1	2 min

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	75	Ardha Cakrāsana		½ min
	75	Parivritta Trikoṇāsana	1+1	2 min
	76	Bhujangāsana		½ min
	77	Śalabhāsana		½min
	78	Viparita Karani with wall support		
	78	Vakrāsana	1+1	2 min
	79	Uṣtrāsana		½ min
6 ➢	82	**Deep Relaxation Technique**		7 min
7 ➢		**Prāṇāyāma and Kriyas**		
	103	Kapālabhati		1 min
	85	Vibhāgīya Śvasana (sectional Breathing)	5x4	3 min
	88	Nādi Śuddhi	5	3 min
	89	Sītkāri/ Śītalī / Sadanta	5	2 min
	91	Bhrāmarī	5	1 min
8 ➢		**Meditation (Dhārāna, Dhyāna)**		
	93	Nādānusandhāna	5x4	3 min
	95	OM Meditation		5 min

Note

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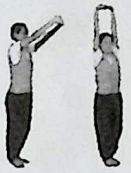
INDEX

Hands Stretch Breathing
Pg no. 43 3x3 rds, 2 min



Hands In and Out Breathing
Pg no.45, 5rds, 1min

Folded Legs Lumbar Stretch
pg no.46, 5x2 rds, 2min

Crossed Legs Lumbar Stretch
pg no. 47, 5x2 rds, 2min
Pavanamuktāsana Lumbar Stretch pg no. 48, 5x2 rds, 2min

Seṭubandhāsana Lumbar Stretch
pg no. 49, 5 rds, 1min

Dorsal Stretch
pg no. 51, 5 rds, 1min

Tiger Breathing
pg no. 52, 5 rds, 1min

Rabbit Breathing
pg no. 53, 1min

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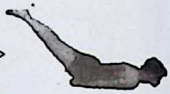
Śaśāṅkāsana Breathing
Pg no.54, 5rds, 1min

Bhujañgāsana breathing
Pg no.55, 5rds, 1min

Ardha Śalabhāsana breahing
Pg no.55, 5x2rds, 2min

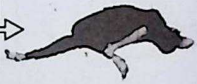


Straight leg raise Breathing
Pg no.57, 5x2rds, 2min

Straight leg raise Breathing (sitting in chair)
Pg no.58, 5x2rds, 2min

Side Leg Raising
Pg no.58, 5x2rds, 2min

Side Lumber stretch
Pg no.59, 5x2rds, 2 min



Loosening of fingers
Pg no.61, 10rds, ½ min

Loosening of wrists
Pg no.63, 10rds, ½ min

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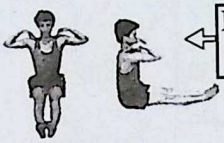

Loosening of elbows
Pg no.64, 10rds, ½min

Shoulder rotation
Pg no.65, 10x2rds, 1 min

Neck Bend
Pg no.66, 10x2rds, 1 min

Ardha Cakrāsana
Pg no 75, 1 +1rds, 2 min

Ardhakati Cakrāsana
Pg no 74, ½ min

Bhujañgāsana
Pg no 76, ½min

Parivṛtta Trikoṇāsana
Pg no 75, 1+1rds, 2 min

Śalabhāsana
Pg no 77, ½min

Vakrāsana
Pg no 78, 1+1rds, 2min

Viparītakarani with support
Pg 78, 1min

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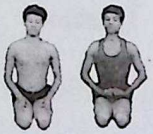
Uṣtrāsana
Pg no 79, ½ min

Instant Relaxation Technique.
Pg no 80, 2 min

Quick Relaxation Technique
Pg 81, 3min

Deep Relaxation Technique
Pg no 82, 7min



Vibhāgīya Śvasana
Pg no 85, 5x4rds, 3min

Nādīśuddhi prāṇāyāma
Pg no 88, 5rds, 3min

Śītalī/ Sītkarī / SadantaPrānāyāma
Pg no 89, 5rds, 2min

Nādānusandhāna
Pg no 93, 5x4rds, 3min

Om Meditation
Pg no 95, 5min

Folded leg lumber stretch
Pg no. 46, 25 rds, 2 min

Cycling
Pg no.71, 50rds, 1 min

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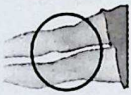
Knee bending
Pg no.72,10x2rds, 2 min

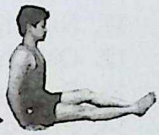
Knee rotation
Pg no.73,10x2rds, 2 min

Patella Movement (Passive)
Pg no.70,10x2rds, 3 min



Knee cap tightening
Pg no.69, 25rds, 2 min

Sitting position loosening
Pg no.69, 25rds, 2 min



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Yoga for Back pain

This is one of the series of books on "Intergrated approach of yoga therapy for modern ailments" pulished by Swami Vivekananda Yoga Prakashana. The authors of this book are both scientists who have carried out systematic research at the yoga research foundation and developed these integrated yoga therapy modules in tune with both the traditional yoga texts and the modern medical understanding of the ailment. Research by these authors since 1980 has validated the efficacy of these techniques through scientific observations published in indexed medical Journals.

Low bacck pain is becoming an increasing problem of modern life style. Apart from sedentary life style and injuries, psychological and emotional stresses are important factors in causation of back pain. A systematic approach to handle the problem at physical, mental and emotional levels are available in this program of IAYT described in this book. These have been continuously improvised based on ongoing clinical research experiences at the 150 bedded residential health home (Prasanthi Kutiram) of sVYASA.

Dr HR Nagendra, ME., Ph.D.,
Director indian institute of yoga
Dr R Nagarathna, M.D., (Gen. Med.).,
F.R.C.P.(Edinburgh)
Chief medical consultant
sVYASA

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